



University of Massachusetts Lowell
Continuing Studies and Corporate Education

Summer 1999

Undergraduate and Graduate Courses

Day and Evenings

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Summer Session I
May 24 – July 1

Summer Session II
July 12 – August 19

Classes Start May 24, 1999

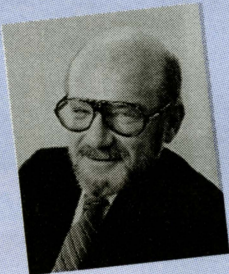
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University of Massachusetts Lowell
Continuing Studies and Corporate Education
One University Avenue
Lowell, MA 01854-2881
(978) 934-2480

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From the Provost



The UMass Lowell faculty and Deans have worked diligently to bring you the high-demand undergraduate, graduate and professional development programs described in this bulletin. UMass Lowell's programs have been ranked among the finest in New England. *Boston Software News* recently designated UMass Lowell as one of the top ten information technology education and training providers.

I believe Lowell's programs are distinctive because of the faculty's commitment to bring real-world experience and expertise to their classrooms. Also, our faculty have migrated many of their courses off-site to industry and into distance learning mediums that are accessible around the world. The University is on the leading edge of distance learning by providing on-line certificates and degree programs, which are the fastest growing in the state.

On behalf of our Deans and faculty, I invite you to join the thousands of graduate and undergraduate students who have benefited from the University's programs. We look forward to working with you.

Robert Wagner,
Provost
University of Massachusetts, Lowell

Corporate Training Programs

The Division of Continuing Education provides training to 1400 area companies annually on campus, at over 50 off-campus locations, and through a range of distance learning media.

Customized On-Site Training

Many of our courses and professional seminars can be offered on-site at your company location. We can custom design our courses to meet your company's specific training needs.

Degree Programs

UMass Lowell offers degree programs at all levels through the doctorate. Many of the courses leading to our degree programs are scheduled with the working professional in mind.

Certificate Programs

In addition to degree programs, we offer several short-term certificate programs for those who want to obtain marketable skills within a concentrated time frame.

*Summer is here.
The new Continuing Education
catalogs have arrived.
Please call (978) 934-2480
to receive a copy!*

Certificate Programs

TRAINING FOR HIGH DEMAND CAREERS

Information TECHNOLOGY



Fundamentals of Information Technology (formerly Computer Proficiency Certificate)

The need for professionals with a strong information technology background will continue to increase as business, government, schools, and other organizations seek new applications for computers and networks in the workplace. This certificate is designed as an introductory program for those who want to explore a broad range of electives in different information technology subject areas before deciding on an area of specialization. This program will serve as a gateway to the other, more specialized certificate programs in information technology.

Required Courses:

- 90.160 Introduction to Information Technology
- 92.202 Introduction to Personal Computing and Microsoft Office*

Electives (Choose 3):**

Programming Electives

- 92.211 Introduction to Programming with C I
- 92.212 Introduction to Programming with C II
- 92.220 Visual Basic
- 92.267 C Programming
- 92.268 C++ Programming
- 92.269 Advanced C++
- 92.270 Visual C++
- 92.364 Problem Solving with C

Database Electives

- 90.171 Applications Software: Access
- 90.342 Relational Database Integration
- 92.474 Relational Database Concepts

Multimedia/Web Electives

- 90.230 Introduction to Multimedia
- 91.113 Exploring the Internet

Additional Electives

- 92.311 Introduction to the UNIX® Operating System
- 92.312 UNIX Shell Programming
- 90.461 LAN/WAN Technologies

*Students with spreadsheet and database experience on Macs or PCs can replace 92.202 with any of the elective courses listed above.

**Note: This is a partial list of computer elective courses. For the complete list of courses that may be applied as electives to this program, see the Continuing Education Undergraduate Course Catalog for computer math courses with the 90. or 92. prefix, or contact the Advising Center at (978) 934-2474.



Client/Server Technology

Economic indicators and business surveys predict that there will be a huge gap in information technology skills well into the year 2006. In fact, many IT positions will remain vacant, because employers cannot find enough professionals with the required skill sets. One area where there continues to be a great demand for skilled professionals is in client/server technology.

Many companies have moved to client/server for quick development of flexible applications using a graphical user interface and accessing multiple database management systems. With the current trend towards distributed processing across the enterprise, skilled professionals will be needed to assist companies in transitioning from more traditional processing platforms to client/server platforms.

Required Courses:

- 90.442 Introduction to Microsoft COM Programming
- 90.443 Fundamentals of Client/Server Computing
- 90.444 Client/Server Networking: Middleware and Groupware

- 90.447 Client/Server Programming with Distributed Objects

- 92.220 Visual Basic
- 92.474 Relational Database Concepts
- 92.479 Advanced Database Applications: Powerbuilder

Electives (Choose 2):

- 90.445 SQL Database Servers
- 90.448 Client/Server Applications and the Internet
- 90.449 SQL Database Servers
- 90.450 Oracle Database Design
- 92.224 Advanced Visual Basic



Computer Science

Many working professionals from a wide variety of academic backgrounds seek to obtain a Master's Degree in Computer Science, but do not possess an undergraduate degree in the field. This certificate program provides these potential graduate students with an opportunity to gain the necessary prerequisite course work which will support their admission into a computer science graduate program. To earn this certificate, a student must demonstrate competency in seven knowledge areas.

Satisfied by:

- 1) 91.250 or 91.101 Computing I and 91.102 Computing II or 92.267 C Programming and 92.360 Data Structures
- 2) Discrete Mathematics Statistics 91.500 or 92.321, 92.322 or previous background
- 3) 92.125 Calculus A and 92.126 Calculus B
- 4) Algorithms 91.404 or previous background
- 5) Languages 91.301 or previous background
- 6) Computer Architecture 91.305 or previous background
- 7) Operating Systems 91.308 or previous background

For more information on the Computer Science Certificate Program, contact Prof. Stuart Smith by phone at (978) 934-3616 or by email at Stuart_Smith@uml.edu.



UNIX

The Certificate in UNIX is designed for those currently in the computer industry who want to upgrade their skills, and for those with basic computer literacy who want to enter this growing field. Students learn skills that are immediately applicable in the workplace as well as C programming, the language in which most networking software is written. Many of the courses in this certificate program may be used to satisfy requirements in the Fundamentals of Information Technology and Data/Telecommunications Certificate Programs, as well as the A.S. or B.S. degrees in Information Systems.

Required Courses:

- 92.267 C Programming
- 92.360 Introduction to Data Structures
- 92.311 Introduction to the UNIX Operating System
- 92.312 UNIX Shell Programming

Electives (Choose 1):

- 92.268 C++ Programming
- 92.269 Advanced C++
- 92.313 UNIX Internals Overview
- 92.314 UNIX System Interface Programming
- 92.316 UNIX System Administration
- 92.318 Advanced UNIX Internals/Tuning

Note: You can now earn the UNIX Certificate online. See CyberEd course listings on page 5.



Data/Telecommunications

Networking is a multi-billion dollar industry. The Certificate Program in Data/Telecommunications trains participants for positions as entry-level network administrators, LAN technicians, and system analysts responsible for networking functions in large or small companies. Many of the courses in this certificate program can be applied towards the A.S. or B.S. degrees in Information Systems.

Required Courses:

- 90.461 LAN/WAN Technologies
- 90.462 TCP/IP and Network Architecture
- 90.463 Advanced Networking Technologies
- 90.464 Network Management
- 92.267 C Programming
- 92.311 Introduction to the UNIX Operating System

UMass Lowell and Nortel/Bay Networks, Inc. also offer a joint certificate program in Data/Telecommunications.

For more information call (978) 934-2480 or visit our Website at <http://www.uml.edu/DCE/Corporate>.



Internet Systems Administration

With the emergence of new Internet servers and the rapid proliferation of Internet sites throughout the world, there is a need for personnel trained in the new technologies to maintain and administer these sites. Students completing the Certificate Program in Internet Systems Administration may pursue careers as Internet operators, systems administrators, system librarians, or Web masters.

Required Courses:

- 90.462 TCP/IP and Network Architecture
- 91.371 Internet Systems Administration
- 91.372 Managing Internet Information Services
- 92.311 Introduction to the UNIX Operating System

Electives (Choose 2):

- 91.373 Dynamic HTML Development
- 91.470 Topics on the Internet
- 91.471 Internet Practicum/Internship
- 91.472 Security Issues on the Internet



Intranet Development

The Certificate Program in Intranet Development provides students with an understanding of the range of skills required to develop a successful intranet. Students are required to complete an intranet survey course, a database design course, and interface design course, as well as core programming courses. In addition, students will select two electives which support an area of focus in intranet development. Students completing the Certificate Program in Intranet Development can qualify for positions as intranet developers, database integration specialists, systems operators, systems administrators, or corporate Web masters.

Required Courses:

- 90.340 Introduction to the Application and Development of Intranets
- 90.341 Intranet Applications for the Organization
- 92.474 Relational Database Concepts
- 90.461 LAN/WAN Technologies

Electives (Choose 2):

- 92.267 C Programming
- 92.268 C++ Programming
- 90.301 JAVA Programming
- 90.305 Introduction to Perl
- 90.342 Relational Database Integration
- 90.462 TCP/IP and Network Architecture
- 90.465 Intranet Network Interface Design
- 90.490 Intranet Practicum/Internship



Web Design & Development

In our rapidly evolving knowledge-based economy, workers are struggling to keep up with the latest technologies and skills. Specifically, in the area of Internet technology, local companies are actively pursuing employees with knowledge and skills in Website design and development. Note: Students participating in this program should have basic Mac OS and/or Windows proficiency.

Required Courses:

- 91.373 Dynamic HTML
- 90.231 Graphics for Multimedia and the World Wide Web (formerly *Graphics for Multimedia*)
- 90.238 Website Development (formerly *Designing Multimedia for the World Wide Web*)

- 70.379 Website Design
- 70.384 Advanced Website Design & Development

Electives (Choose 2):

- 70.262 Digital Imaging & Photography
- 70.385 Streaming Media for the Web
- 90.245 Website Server Administration
- 90.246 Active Server Pages
- 90.236 Instructional Design for Interactive Media
- 90.247 Advanced Web Authoring: Shockwave & Flash!
- 90.302 Java Script
- 90.248 Website Database Implementation
- 90.249 Developing IT Training for the Web
- 90.250 E-Commerce on the Web



Multimedia Applications

The multimedia industry is booming and promises to become one of the most lucrative industries of the century. Individuals with the skills and knowledge to communicate information using the new technology will flourish in this emerging industry. The Multimedia Applications Certificate Program at UMass Lowell is one of the largest, most comprehensive programs of study in multimedia available in New England. It draws upon the expertise of several departments, colleges, and centers within the University, as well as outside expertise from industry professionals.

Required Courses:

- 90.230 Introduction to Multimedia
- 90.231 Graphics for Multimedia and the World Wide Web
- 90.232 Desktop Video Production
- 90.233 Multimedia Authoring Software: Using Macromedia's Director
- 90.234 Designing and Developing Interactive Media

Electives (Choose 2):

- 42.221 Writing for Interactive Media
- 70.262 Digital Imaging and Photography
- 70.264 Computer Graphics & Illustration
- 70.291 Introduction to Graphic Design
- 70.376 3D Computer Animation
- 70.377 Advanced Animation: After Effects
- 70.379 Website Design
- 70.384 Advanced Website Design and Development
- 70.385 Streaming Media for the Web
- 90.236 Instructional Design for Interactive Media
- 90.238 Website Development (formerly *Designing Multimedia for the World Wide Web*)

- 90.239 Multimedia Scripting Using Macromedia Director's Lingo
- 90.247 Advanced Web Authoring: Shockwave and Flash!
- 90.249 Developing IT Training for the Web



Interactive Game Design

The interactive game industry is one of many rapidly growing digital design industries. Animation and game design businesses represent a significant percentage of regional startup companies. At the moment, there are very few programs in greater New England that offer training and education in this new growth area. Students completing the Certificate in Interactive Game Design will have the opportunity to build a strong foundation in multimedia technologies and game design. Note: Students participating in this program should have basic Mac OS or Windows proficiency.

Multimedia Applications Certificate Program



UMass Lowell Offers One of the Largest and Most Comprehensive Programs of Study in Multimedia Applications

- *State-of-the-art Multimedia Labs*
- *Courses available on both Mac and PC platforms*
- *Rich and diverse curriculum*

For more information on the Multimedia Applications Certificate, see page 3 or call (978) 934-2495.

Required Courses:

- 90.233 Multimedia Authoring Software: Director
90.236 Instructional Design for Interactive Media
70.262 Digital Imaging & Photography
70.376 3D Computer Animation
70.377 Advanced Animation
70.378 Interactive Game Design
70.381 Advanced Game Design

Electives (Choose 1):

- 70.496 Practicum Experience/Game Design
90.231 Graphics for Multimedia and the World Wide Web



Graphic Design and Digital Imaging

This certificate program offers students interested in breaking into graphic design and electronic publishing an innovative mix of traditional design courses along with several courses in the latest publishing technologies. Courses cover traditional graphic design to digital imaging, computer graphics, designing for multimedia and the World Wide Web, print production, and more. Students in the program complete numerous design portfolio pieces geared towards the professional market.

Required Courses:

- 70.291 Introduction to Graphic Design
70.240 Fundamentals of Typography
70.245 Desktop Publishing: Layout and Production
70.262 Digital Imaging and Photography
70.391 Advanced Graphic Design
70.400 Portfolio Production Seminar

Electives (Choose 3):

- 70.264 Computer Graphics & Illustration
70.376 3D Computer Animation
70.377 Advanced Animation: After Effects
70.379 Website Design
70.384 Advanced Website Design & Development
70.392 Design for Advertising
90.230 Introduction to Multimedia
90.231 Graphics for Multimedia and the World Wide Web
(formerly *Graphics for Multimedia*)
90.233 Multimedia Authoring Software: Using Macromedia's Director
90.238 Website Development
(formerly *Designing Multimedia for the World Wide Web*)

Graphic Design & Digital Imaging Certificate

Interested in breaking into graphic design and electronic publishing?

The Certificate Program in Graphic Design & Digital Imaging offers an innovative mix of traditional design courses along with several courses in the latest publishing technologies.

For more information on the Graphic Design & Digital Imaging Certificate, see page 4 or call (978) 934-2493.



Technical Writing

The Certificate Program in Technical Writing trains participants to be proficient in desktop publishing, hypertext, software documentation, microcomputer and application software, and programming languages. Taught by practicing professionals, students learn to use the most current technologies and processes. Those with strong writing skills and an aptitude for computers are encouraged to enter the program.

Required Courses:

- 42.401 Principles of Technical Writing
42.402 Software Writing
42.403 Advanced Software Writing
92.202 Introduction to Personal Computers and Microsoft Office*

Electives (Choose 2):

- 70.245 Desktop Publishing: Layout and Production OR
2 Computer Electives

*Note: Students who have previous computer experience may substitute a more advanced computer course for this computer course.

**See Continuing Education Course Catalog for computer courses with a 90. or 92. prefix.



Engineering TECHNOLOGY



Computer-Assisted Manufacturing

The Certificate in Computer-Assisted Manufacturing is designed to provide engineers, technicians, managers, and those working in a manufacturing environment with an introduction to the computer as an aid to engineering and manufacturing. Coursework for the certificate includes two-dimensional CAD drafting, three-dimensional design, solid modeling, finite element analysis, and the use of the computer as an aid to machining.

Required Courses:

- 23.200 CADr (Computer-Aided Drafting)
23.480 CADES (Computer-Aided Design)
23.484 Intro Pro-E
23.419 Computer-Aided Manufacturing

Electives (Choose 3):

- 23.101 Engineering Graphics
23.102 Engineering Design and Graphics
23.301 Manufacturing Technology Laboratory
23.305 Manufacturing Processes OR
23.306 Electronics Manufacturing Technology
23.430 Industrial Automation
23.474 Design for Manufacture
23.481 Applied CAD Design



Plastics Engineering Technology & Plastics Engineering Technology with Packaging Option

The Certificate in Plastics Engineering Technology provides professional training for students needing theoretical and technical information about plastics. Taught by UMass Lowell's staff of international experts, the courses provide students with practical instruction applicable to materials, processing, and design engineering. The program should be of particular benefit to technicians, process engineers, and program development specialists.

Required Courses for Plastics Engineering Technology Certificate:

- 27.201 Plastics Material Science I (Commodity Thermoplastics)
27.202 Plastics Material Science II (Engineering Thermoplastics)
27.217 Plastics Processing Engineering Laboratory
27.373 Plastics Mold Engineering I (Mold Design)
27.401 Processing Technology I
27.402 Processing Technology II

Required Courses for Plastics Engineering Technology Certificate with Packaging Option:

- 27.201 Plastics Material Science I
27.209 Introduction to Plastics Processing
27.311 Principles of Packaging
27.312 Materials and Packages
27.313 Packaging Development
27.314 Packaging for the Environment

Electives (Choose 3):

- 27.203 Plastics Material Science III (Thermosetting Resins)
27.301 Additives for Polymeric Materials
27.303 Reinforced Plastics and Composites
27.331 Injection Molding
27.376 Plastics Mold Engineering II
27.403 Physical Properties of Polymers I
27.404 Physical Properties of Polymers II
27.405 Polymer Characterization
27.406 Polymer Structures/Properties
27.407 Plastics Industry Organization
27.418 Product Design
27.425 Dynamic Mechanical Properties of Plastics I
27.426 Dynamic Mechanical Properties of Plastics II
27.440 Commercial Development of Plastics
27.451-27.458* Selected Topics I-VIII
23.416* Statistical Quality Control
70.291* Introduction to Graphic Design
70.391* Point of Purchase Design and Packaging

*Recommended for Packaging Option Students



Criminal JUSTICE



Community Policing

In recognition of the current growth and increase of federal funding in Community Policing, UMass Lowell is offering students an opportunity to pursue their interests with the Certificate in Community Policing. This certificate program is designed to provide students with an overall knowledge of Community Policing. The courses in this program can be applied to the B.S. in Criminal Justice.

Required Courses:

- 44.365 Hate Crimes
44.347 Community Policing
44.435 Alternative Dispute Resolution
44.477 Domestic Violence
44.478 Child Maltreatment
44.481 Crime Analysis
48.350 Social Services or 47.209/47.473

Electives (Choose 2):

- 42.222 Oral Communication
44.261 Juvenile Delinquency
44.335 Juvenile Court: Philosophy and Practice
44.422 Victimology
44.496 Practicum
47.328 Dynamics of Interpersonal Relations
47.361 Problems and Issues in Childhood and Adolescence
48.231 Sociology of the Family
48.255 Social Deviance
69.253 Introduction to Management and Organizational Behavior



Environmental STUDIES



Environmental Technology

This certificate program is designed for personnel employed in safety, laboratory, physical plant, distribution, transportation, drafting, public works, or health board functions, as well as consultants. Students in the program gain knowledge relevant to air pollution control, resource recovery, analytical services, hazardous waste management, waste management, water infrastructure, instrument manufacturing, solid waste management, energy sources, asbestos abatement, and water utilities development. Many of the courses in this certificate program can be applied towards the B.S. degree in Civil Engineering Technology: Environmental Option.

Required Courses:

- 15.340 Hazardous Waste Management
15.378 Air Quality Monitoring
15.420 Solid Waste Management
86.131 Environmental Chemistry I OR
84.121 Chemistry I
84.122 Chemistry II OR
86.132 Environmental Chemistry II

Electives (Choose 2):

- 15.280 Industrial Waste Treatment
15.356 Water Treatment
15.358 Wastewater Treatment
15.388 Pumps and Compressors
17.130 Electrical Basics and Laboratory
41.367 Environmental Law
87.403 GIS in Environmental Studies
OSHA Hazwopper



Hazardous Waste Management

The Certificate Program in Hazardous Waste Management is designed to provide environmental technicians, engineers, managers, and those working in the environmental field with an introduction to regulations and treatment technologies. Course work covers basic environmental chemistry, state and federal environmental regulations, various types of groundwater contamination, and suitable technologies to abate hazardous waste contamination.

Required Courses:

15.280 Industrial Waste Treatment
15.340 Hazardous Waste Management
15.396 Groundwater Resources
41.367 Environmental Law
86.131 Environmental Chemistry I

Electives (Choose 3):

15.388 Pumps and Compressors
15.420 Solid Waste Management
15.492 Water/Wastewater Plant Management
86.132 Environmental Chemistry II
OSHA Hazwopper



Land Surveying

Land surveyors measure distances, directions, and angles between points and elevations of points, lines, and contours on the Earth's surface. They record results, verify the accuracy of data and prepare plans, maps, and reports. Surveyors who establish official boundaries must be licensed by the state in which they work. The Certificate in Land Surveying can prepare students for licensure in Massachusetts when combined with additional state requirements.

Required Courses:

15.123 Surveying I
15.124 Surveying II
15.262 Legal Aspects of Land Surveying
15.299 Surveying III
92.123 Precalculus Mathematics II

Electives (Choose 2):

15.113 CAD
15.257 Highway Elements
15.264 Fundamentals of Land Development
23.101 Engineering Graphics
41.367 Environmental Law
41.370 Real Estate Law
87.403 GIS in Environmental Studies



Wastewater Treatment

The Certificate Program in Wastewater Treatment prepares students for all levels of state certification required to manage and operate a modern wastewater treatment facility. The program is designed for individuals seeking to enter the field of wastewater treatment and for those in the field who want to upgrade their skills or achieve a higher level of state certification. Many of the courses in this certificate program can be applied towards the A.S. degree in Civil Engineering Technology: Wastewater Option.

Required Courses:

15.261 Wastewater Treatment Plant Operations I
15.263 Wastewater Operations Lab I
15.280 Industrial Waste Treatment
15.361 Wastewater Treatment Plant Operations II
15.363 Wastewater Treatment Lab II

Electives (Choose 2):

15.152 Water Biology
15.388 Pumps and Compressors
15.452 Operation and Maintenance of Wastewater Collection Systems
Water/Wastewater Plant Management
86.131 Environmental Chemistry I
86.132 Environmental Chemistry II



Water Treatment

The Certificate Program in Water Treatment provides the most effective way to prepare for the water treatment certification exams. Courses in the program are intended to provide students with the technical knowledge to operate and maintain physical/chemical water treatment facilities and water distribution systems. Many of the courses in this certificate program can be applied towards the A.S. degree in Civil Engineering Technology: Water Option.

Required Courses:

15.272 Water Supply & Treatment Operations I
15.274 Water Works Operations Lab I
15.355 Water Distribution Systems
15.372 Water Supply and Treatment Operations II
86.131 Environmental Chemistry I

Electives (Choose 2):

15.152 Water Biology
15.374 Water Works Operations Lab II
15.388 Pumps and Compressors
15.492 Water/Wastewater Plant Management
86.132 Environmental Chemistry II

Additional Certificate Programs

UMass Lowell also offers certificate programs in:

- Accounting
- Computer Engineering Technology
- Electro-Optics
- Electronics Technology
- Manufacturing Technology
- Nutrition
- Paralegal Studies
- Quality Assurance
- Semiconductor Manufacturing
- Spanish

For more information and a detailed program packet, please call the Division of Continuing Education at (978) 934-2470.

UMass Lowell offers a variety of distance education opportunities for students. These include courses on-line, telecourses, and two-way video instruction.

CyberEd — Quality Education From Our Desktop to Yours — Courses Over the Internet

<http://cybered.uml.edu>

UMass Lowell's CyberEd Program brings the classroom to you. Earn a Certificate in UNIX or in Fundamentals of Information Technology on-line or apply appropriate courses to your current certificate or degree program. For the latest information regarding our on-line courses, visit the CyberEd Website at <http://cybered.uml.edu>, check out the listings in this bulletin or call (978) 934-2467. For additional on-line courses visit the UMass Dartmouth CyberEd Program at: <http://www3.umass.edu>.

Students are responsible for fulfilling course prerequisites — see individual course listings in this bulletin and on the CyberEd Website. To register for a UMass Lowell CyberEd course, see the registration form on page 20, or call (978) 934-2700. Be sure to provide your email address when you register.

| Course # | Course Name (All are 3-credit courses) | Prerequisite | Instructor |
|------------|---|--|-------------------|
| 42.101-022 | College Writing I | Requires CommonSpace software | Lisa Mahoney |
| 42.221-021 | Writing for Interactive Media | Requires word processing software & flowcharting software | Timothy Garrand |
| 42.224-021 | Business Writing | Requires CommonSpace software; 42.102 | Nancy Brown |
| 42.226-021 | Technical and Scientific Communication | Requires CommonSpace software; 42.102 | Dirk Messelaar |
| 48.351-021 | Sociology of Health and Health Care | 48.101 | John Ost |
| 62.406-021 | Purchasing and Materials Management | 62.201, BSBA students & College of Management Dean permission. Requires proctored exams | David Lewis |
| 69.281-021 | Purchasing Principles | Requires proctored exams; P: 62.201 | David Lewis |
| 90.160-021 | Introduction to Information Systems | | Luvai Motawalla |
| 90.301-021 | Java Programming | 92.268, Sun Java Dev. Kit | Adrian Smith |
| 90.302-021 | JavaScript | 91.373 or previous programming experience | Dave Sciuto |
| 90.305-021 | Introduction to Perl | 92.267 | Paul Gong |
| 90.340-021 | Intro to the Application & Development of Intranets | 91.113 or equivalent | Jerry Goguen |
| 90.440-021 | Programming for the Internet | 90.301, 91.373 | Scott Gray |
| 90.461-021 | LAN/WAN Technologies | 92.267 | Richard Sweeney |
| 90.462-022 | TCP/IP Network Architecture | 90.461 | Ed Barnes |
| 91.373-021 | Dynamic HTML Development | | William Dubie |
| 92.220-023 | Visual Basic | Requires Visual Basic vers. 6.0, Windows & working knowledge of high-level language | Randhir Chhatwal |
| 92.267-024 | C Programming | Requires C compiler software, previous programming experience | Timothy Niesen |
| 92.267-025 | C Programming | Requires C compiler software, previous programming experience | Ann Marie Hurley |
| 92.268-024 | C++ Programming | Requires C++ compiler software; 92.267 or 92.212 | Mark Hertel |
| 92.268-025 | C++ Programming | Requires C++ compiler software; 92.267 or 92.212 | Lance Smith |
| 92.269-021 | Advanced C++ Programming | Requires C++ compiler software; 92.268 | Mark Hertel |
| 92.311-022 | Intro to UNIX | | Fred Vegliante |
| 92.311-023 | Intro To UNIX | | Sean McGowan |
| 92.312-022 | UNIX Shell Programming | 92.311 | Michael Richards |
| 92.360-021 | Intro to Data Structures | 92.267, or 92.212 and 92.364, Requires proctored exams | Victor Gagnon |
| 92.419-021 | Computer Algebra w/ Mathematica | Requires Mathematica software; 92.126 or computer prog. language | Kenneth Levasseur |
| 92.421-011 | Abstract Algebra I | Requires Mathematica software; 92.221 or 92.321 | Kenneth Levasseur |
| 92.474-021 | Relational Database Concepts | 92.267 | Paul Giguere |

Important Notice for CyberEd Students

Two business days after registering for a CyberEd course, students should visit the CyberEd Website at <http://cybered.uml.edu> to confirm course registration, their user name, and the Website address. Students must complete the confirmation process to receive course access information. This information will not be mailed to students. Students who do not receive this information prior to May 24 should first visit the CyberEd Website and then contact CyberEd staff at (978) 934-2467 or email cybered@uml.edu.

For more information, see the CyberEd Website at <http://cybered.uml.edu>

Student Requirements

Students must provide the following: a personal computer, frames capable browser (e.g., Netscape Navigator 3.04, Internet Explorer 3.01, or equivalent), a high-speed modem (28.8 kbps or better), Internet access, and communications, email and World Wide Web software (some courses may have additional software requirements). Students are responsible for providing their own Internet access.

CyberEd faculty assume students are competent in the use of Internet tools such as Web browsers, email, chat, ftp, and telnet. Numerous tutorials are available on the Internet at <http://cybered.uml.edu/tutorial/>. Students are responsible for learning to use these tools before enrolling in a CyberEd course.

PROFESSIONAL INSTITUTES



ENTREPRENEURSHIP INSTITUTE

Weekend Seminars!

If you have always wanted to start your own consulting firm, import/export firm, mail-order business or any self-supporting venture — now is the time to prepare yourself for the future!

Most of these workshops include a Harvard Business School Case Study (HBS). Others include extensive handouts. All of the seminars in the Entrepreneurship Institute are co-sponsored by the United States Small Business Administration.

For further information on these workshops, please call Katharine Galatsis at (978) 934-2446. To register for the workshops, call the Office of Enrollment Services at (978) 934-2700.

*Marketing & Selling for Entrepreneurs [00.037-011]

Instructor: Mel Epstein, President and founder of Leveraged Thinking™, a consulting firm in Cambridge, MA which assists individuals and companies design and implement successful business strategies.

For people in all service and product fields and at all stages of development who want to design their effective marketing strategy and develop their ability to sell successfully. Covers the complete cycle of effective marketing: deciding what business to be in, developing products and services, describing the products and services, communicating to potential customers, and closing the sale. Includes the key elements of successful selling: developing your positive thinking, writing your sales talk, marking your sales presentation, listening effectively, and closing the sale.

Sat.: 11:00 am–6:00 pm — 1 day — 5/22/99
Tuition: \$125.00

*Starting and Succeeding in the Restaurant and Catering Business [00.008-011]

Instructor: Mel Epstein

Opportunities abound for the catering and restaurant entrepreneur with a well-prepared business plan (more than 40% of the food dollar is consumed outside the home). This seminar covers preparing a complete business plan for a successful catering and restaurant business. It will cover defining your food service — from concept and organizing to financing and marketing. This seminar will show you how to advertise, plan meals, analyze costs to increase profits, determine the best location, raise money and motivate your staff. Includes extensive handouts illustrating successful catering and restaurant management practices. (HBS)

Sun.: 11:00 am–6:00 pm — 1 day — 5/23/99
Tuition: \$125.00

*Starting Your Own Consulting Practice [00.004-011]

Instructor: Mel Epstein

For those in any field interested in starting and succeeding in consulting. Covers the three key elements of success in consulting: organizing, financ-

ing, and marketing. Topics include: identifying potential clients, advertising, sales and presentations, pricing your services, closing a sale, translating your expertise into advice, writing successful proposals, and estimating the time required to complete a project.

Sat.: 11:00 am–6:00 pm — 1 day — 6/5/99
Tuition: \$125.00

*Starting Your Own Mail Order Business [00.005-011]

Instructor: Mel Epstein

This seminar covers the six steps for succeeding in direct marketing: developing your merchandise/service concept, choosing merchandise/services, preparing the direct communication, selecting the media for communication, fulfilling the order, and monitoring the results. Since in the Internet era, the successful mail order entrepreneur should consider all media options. In this seminar, we will cover: classified ads, display ads, marketplace ads, catalogs, television ads, infomercials, and Websites. You will learn how to estimate your response rate and how to use financial feasibility formulas to plan for your success. The emphasis is on designing a step-by-step strategy that will work for you. (HBS)

Sun.: 11:00 am–6:00 pm — 1 day — 6/6/99
Tuition: \$125.00

*Starting Your Own Import-Export Business [00.002-011]

Instructor: Mel Epstein

This seminar covers how to develop a complete import-export strategy: selecting products, identifying distributors, arranging transportation and payments, satisfying U.S. Customs requirements, and meeting export regulations. Includes how to locate overseas suppliers and buyers, and how to develop a strategy that will work for you. Each participant will receive a 100-page pamphlet and Harvard Business School Case Study. (HBS)

Sat.: 11:00 am–6:00 pm — 1 day — 6/12/99
Tuition \$125.00

*Entrepreneurship: Starting and Succeeding in Any Type of Business [00.001-011]

Instructor: Mel Epstein

For people in all fields and at all stages of development who want to learn the essential nuts and bolts and key steps for starting and succeeding in your own business. Includes the four comprehensive elements of successful entrepreneurship: deciding what business to be in, organizing, financing, and marketing. Topics include preparing a business plan, raising money, closing a sale, hiring, developing a successful organization, motivating, marketing, projecting cash flow and income statements, and answering legal and tax questions. The emphasis is on designing a strategy that will work for you! The instructor will discuss the essential entrepreneurial steps critical to your success that he has discovered in thirty years of coaching business people and teaching two thousand seminars. Each student will receive two Harvard Business School cases. Videos of Ben & Jerry's, Esprit, and Patagonia will be shown.

Sun.: 11:00 am–6:00 pm — 1 day — 6/13/99
Tuition \$125.00

NOTICE

We are no longer accepting applications into the following degree and certificate programs:

Associate Degrees:

Accounting
Applied Chemistry
Applied Chemistry: Biotechnology Option
Applied Chemistry: Hazardous Waste Option
Applied Mathematics
Applied Mathematics: Computer Mathematics Option
Banking
Criminal Justice

Bachelor's Degrees:

Applied Chemistry
Applied Chemistry: Coatings Option

Certificate Programs:

Banking
Engineering Skills
International Trade
Novell Option of Data Telecommunications
Security Management
Windows Programming

A student enrolled in any of these programs should schedule an appointment with the appropriate program advisor to help plan a schedule for degree or certificate completion.



MANAGEMENT INSTITUTE

*Managing and Supervising for Results [00.017-011]

Instructor: Mel Epstein

No matter what level of experience you have as a manager, there are four key elements of effective management you can employ: planning, organizing, leading, and monitoring. We will cover the three key elements of successful supervision: division of work, delegation, and coordination. Includes how to communicate effectively, monitor without meddling, transcend the paradox of systems versus spirit, use the three-step action plan to get work completed on time, motivate and compensate. Using a series of video and Harvard Business School Case Studies, we will illustrate the management and supervision methods you can use to succeed.

Wed.: 10:00 am–5:00 pm — 1 day — 5/26/99
Tuition: \$125.00

*NEW! Time Management [00.021-011]

Instructor: Mel Epstein

We will cover the habit-forming methods and mental attitudes you can use to be more effective and efficient. These include maintaining your files to gain three-minute access to every item, using the four key steps to cleaning the mess on your desk, employing a master list, daily list, tickler file and calendar holding file. Covers the five types of tasks, leverage, concentration, and prime time. Other topics include setting priorities, staying focused, overcoming procrastination, controlling interruptions, establishing blocks of time, telephone time management, meeting time management, batching, managing by objectives and delegating.

Wed.: 1 pm–5 pm — 1 day — 6/9/99
Tuition: \$115.00

*Finance for Non-Financial Managers [00.034-011]

Instructor: Mel Epstein

For people in all fields who want to understand the essentials of finance and how to use finance successfully in their work. Covers the income statement, the cash flow statement, the balance sheet, the five types of financial ratios, budgeting and break-even analysis, the time value of money-making projections, raising venture capital and preparing a business plan. Includes Harvard Business School Case Studies. (HBS)

Wed.: 10:00 am–5:00 pm — 1 day — 6/16/99
Tuition: \$125.00

Check Out Our World Wide Web Site!

Continuing Education information can also be retrieved over the World Wide Web. Look for us at <http://www.uml.edu/DCE> for additional information on current course schedules, course descriptions, degree or certificate program information, and much more!



*Marketing Management for Everyone [00.010-011]

Instructor: Mel Epstein

This seminar is designed to teach you the essentials of marketing and develop your marketing imagination. We will cover the elements of the marketing mix: product, price, promotion, and placement. Includes how to do financial analysis for marketing decision, new product and service feasibility analysis, competitive analysis, customer analysis and distribution analysis. Key concepts include product life-cycle, skimming vs. penetration pricing, direct vs. indirect selling, and selective vs. intensive distribution. Additional topics include virtual marketing, guerrilla marketing, and direct marketing. Includes Harvard Business School Case Studies (HBS) and selected videos.

Wed.: 10:00 am–5:00 pm — 1 day — 6/23/99

Tuition: \$125.00

*Successful Negotiating [00.019-011]

Instructor: Mel Epstein

This seminar will cover the five key elements of successful negotiating: preparation, options, power, information, and time. The three types of tricky tactics and how to counter them will be included.

Three leading negotiating methods will be demonstrated: the Harvard Negotiating Project "Win-Win," Bob Woolf's "Friendly Persuasion," and Brian Tracy's "Negotiating Strategies & Tactics." Seminar participants are encouraged to bring practical negotiating questions. We will show you how to develop a pragmatic negotiating style that fits your personality.

Wed.: 10:00 am–5:00 pm — 1 day — 6/30/99

Tuition: \$125.00



If you have any questions regarding the ESL Institute Courses, please call the Office of Enrollment Services/Continuing Education at (978) 934-4996 or fax at (978) 934-3087.

*English as a Second Language for Beginners [00.350-011]

Instructor: Evelyn Dorosz

For those who are somewhat familiar with the English language. Course includes exercises in the basics of vocabulary, grammar and usage.

Tues.: 6:30–8:30 pm — 6 weeks — Begins June 1

Tuition: \$85.00

*English as a Second Language for Intermediates [00.352-011]

Instructor: Evelyn Dorosz

Intended to help the student who has already acquired some knowledge of the English language. It is designed to further develop the mechanics of grammar and usage with emphasis on building a larger and more meaningful vocabulary.

Thurs.: 6:30–8:30 pm — 6 weeks — Begins June 3

Tuition: \$85.00

*ESL Advanced, Part A [00.363-011]

Instructor: Sr. Cecile Duquette

The five basic foreign language skills (i.e., listening, comprehension, speaking, reading and writing) will be greatly emphasized, while at the same time, a greater knowledge and proficiency in the use of

English grammar will be further developed. The different functions of the parts of speech will provide a wide range of experiences in grammatical structures of all kinds.

Tues.: 5:30–7:30 pm — 6 weeks — Begins June 1

Tuition: \$85.00

*ESL Advanced, Part B [00.375-011]

Instructor: Sr. Cecile Duquette

Using the grammar skills strengthened in Part A, the students will further improve the practice of adjective, adverbial and noun clauses, showing relationships between ideas and conditional sentences. The guided and appropriate grammatical practices will provide the students with ample opportunities not only to better their English grammar but also to prepare them in the building of a strong, meaningful, and well-structured paragraph.

Wed.: 5:30–7:30 pm — 6 weeks — Begins June 2

Tuition: \$85.00

*English (American) Pronunciation for Foreign-Born Speakers [See #s Below]

Instructor: Gailanne Desmond or John Soucy

For those who have a good command of the English language, but need accent-reduction assistance. Students are encouraged to bring a tape recorder and blank cassettes to class.

Section A (Desmond): Sat.: 8:30–10:00 am — 6 weeks — Begins May 29 — Course #00.354-011

Section B (Desmond): Sat.: 10:15–11:45 am — 6 weeks — Begins May 29 — Course #00.354-012

Section C (Soucy): Sat.: 9:30–11:00 am — 6 weeks — Begins May 29 — Course #00.354-013

Tuition: \$85

*English Conversation Practice [00.370-011]

Instructor: John Soucy

Put your English as a second language coursework into practice. Improve your spoken English through conversation and oral speaking skills.

NOTE: You must have someone to converse with at home in order to complete out-of-class assignments.

Tues. & Thurs.: 5:30–7:30 pm — 6 weeks — Begins June 1

Tuition: \$105.00

Continuing Education and the Department of Music

1999 Summer Music Program

June 28 – August 13, 1999

- For music educators, graduate and undergraduate students, certification candidates, and others interested in music education.
- Earn PDPs toward teacher recertification.
- Earn Continuing Education Units (CEUs).
- Earn credits toward a master's degree in music education.

- Choose from popular methodology workshops.
- Upgrade your computer technology skills.
- Refresh your content knowledge.
- Attend a music series publishing company workshop.
- Explore the most current issues in the field of contemporary music education.

Silver Burdett Ginn "The Music Connection"
June 28–30
(Noncredit, Undergraduate, Graduate) 1 Credit

Orff Schulwerk Teacher Training Workshops
July 6–16 Level I
(Undergraduate, Graduate) 3 Credits,
Level II (Graduate only) 3 Credits

New! Instrumental Music Curriculum Models
July 6–July 16
(Undergraduate, Graduate) 3 Credits

Multicultural Music Education
July 19–28
(Undergraduate, Graduate) 3 Credits

New! Computers in the Music Curriculum
July 20–30
(Undergraduate, Graduate) 3 Credits

Marching Band Techniques
July 29–August 6
(Undergraduate, Graduate) 3 Credits

"A Splash of Kodaly"
August 2–6
(Undergraduate, Graduate) 1 Credit

New! Quantitative Research in Music Education
August 2–12
(Undergraduate, Graduate) 3 Credits

New! Finale — The Art of Music Notation
August 12–13
(Undergraduate, Graduate) 1 Credit

For more information about these courses or to receive a Music Education Brochure, please contact the Special Programs Office at (978) 934-2405 or write University of Massachusetts Lowell, Continuing Education Special Programs, One University Avenue, Lowell, MA 01854. Information and course descriptions are also available on our Website: <http://www.uml.edu/DCE>.

*NEW! TOEFL Preparation [00.382-021]

Instructor: John Soucy

This 48-hour course prepares non-English speaking students for the test of English as a Foreign Language required by American colleges and universities as part of the admissions procedure.

Mon. & Wed.: 7:00–9:00 pm — 12 weeks — Begins June 2

Tuition: \$225.00



The Health Professions Institute helps health professionals update their clinical skills and stay current with the industry. Participants in this workshop may receive CEU credit. For more information, call the Office of Special Programs at (978) 934-2405.

*Therapeutic Touch Workshop — Basic Level: Krieger/Kunz Method [00.518-011]

Instructor: Katherine C. Rosa

Therapeutic Touch: Krieger/Kunz Method is a contemporary interpretation of several ancient-healing practices. Therapeutic Touch has been shown through scientific research to induce the relaxation response, decrease pain, and support the immune system. In this workshop, the students will learn to use their hands to sense the human energy field to facilitate another's healing. Healing is defined as movement towards wholeness and order. The human energy field in a state of health is smooth. In a state of disease the field is asymmetrical or out of order. The practitioner will learn to use their hands to restore order within the human energy field. As the human energy field extends beyond the body, the practitioner's hands usually move within two to six inches off the body. Please wear comfortable clothing and be prepared to act as both practitioner and patient.

Sat. & Sun.: 9 am–4 pm — 2 days — June 12 & 13

Tuition: \$150.00

A Consortium of District Mathematics Leaders Building Regional Capacity

UMass Lowell, the Center for Mathematics Education at EDC, and the Eastern Mathematics Association of Mathematics Department Heads are pleased to offer the 1999/2000 National Science Foundation-funded summer programs for department heads, curriculum coordinators, and lead teachers.

The program will feature advanced disciplinary content, seminars in professional development and leadership, and mentored academic year field experience.

For more information, contact Alan Doerr at (978) 934-2415 or email: Alan_Doerr@uml.edu

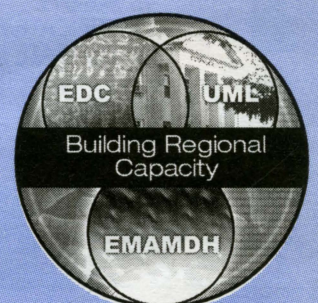
Summer 1999 July 12 - August 6

04.536-021 Professional Development for Mathematics Leaders

92.500-021 Discrete Structures

92.520-021 Problem Solving

92.550-022 Mathematical Modeling



Academic Credit Course Listing

REMINDER: THIS COURSE LISTING COMBINES THE UNIVERSITY OF MASSACHUSETTS LOWELL DAY SCHOOL COURSES AND THE CONTINUING EDUCATION COURSES. IT IS IMPORTANT TO CHECK COURSE NUMBERS AND PREREQUISITES TO ENSURE ENROLLMENT IN THE CORRECT CLASS.

Summer Session I
May 24–July 1, 1999

Day Classes begin on May 24 and meet Monday through Thursday for 3-credit courses and meet Monday through Friday for 4-credit courses.

M/W Evening Classes begin on May 24 and include 3 FRIDAYS: May 28, June 11, and June 25 at the regularly scheduled hours.

T/Th Evening Classes begin on May 25 and include 2 FRIDAYS: June 4 and June 18 at the regularly scheduled hours.

| | No. | Title | Time | Eve. | Cr (Co) | P: Prerequisite/ C: Corequisite/Other | Instructor |
|--|---|---|------------------|--------|---------|--|---------------------|
| Accounting | 60.201-011* | Accounting/Financial | 7:30-10:30 am | M/W | 3 | | Charles Thompson |
| | 60.201-012* | Accounting/Financial | 6:00-9:00 pm | T/Th | 3 | | Charles Thompson |
| | 60.202-011 | Accounting/Managerial | 11:00 am-2:00 pm | M/W | 3 | P: 60.201 or 67.102 | Samuel Chesler |
| | 60.331-011 | Cost Management Systems | 6:00-9:00 pm | M/W | 3 | P: 60.202, BSBA (non-Acct. majors) and College of Mgmt. Dean permission | Paul Brown |
| | 67.101-011* | Accounting Principles I | 7:00-10:00 pm | T/Th | 3 | | Brian Goguen |
| | 67.102-011 | Accounting Principles II | 7:00-10:00 pm | T/Th | 3 | P: 67.101 | Claire Bickford |
| | 67.209-011 | Federal Income Taxes | 7:00-10:00 pm | T/Th | 3 | P: 67.102 | Tiffany Lane |
| | NOTE: Courses with the 67 prefix are not intended for students matriculating in the Bachelor of Science degree programs in the College of Management and may not transfer into the BSBA program. | | | | | | |
| | *60.201 is for students with some accounting/business experience. 67.101 is for students with no accounting experience. | | | | | | |
| | Students may not receive credit for both 60.201 and 67.101. | | | | | | |
| CERTIFICATE IN ACCOUNTING | | | | | | | |
| Art/Computer Graphics | (Also see Information Technology for additional Multimedia and Web Development course offerings.) | | | | | | |
| | 70.245-021 | Desktop Publishing Layout and Production/Mac (14 weeks) | 7:00-10:00 pm | T | 3 | P: Basic Macintosh proficiency | Nancy Jones |
| | 70.262-021 | Digital Imaging & Photography/Mac (14 weeks) | 7:00-10:00 pm | M | 3 | P: Basic Macintosh proficiency | Ella Carlson |
| | 70.291-021 | Intro to Graphic Design/Mac (14 weeks) | 7:00-10:00 pm | Th | 3 | P: Basic Macintosh proficiency | Aline Sirett Cope |
| | 70.379-011 | Website Design/Mac | 7:00-10:00 pm | M/W | 3 | P: 70.262 or 90.231, and 90.238 | Robin Masi |
| | 70.391-021 | Advanced Graphic Design/Mac (14 weeks) | 7:00-10:00 pm | W | 3 | P: 70.291, 70.240, 70.245 or instructor permission | Anne Katzeff |
| | While the above courses will not directly transfer into the Art Department's B.A./B.F.A. day school degree program, certain two-course clusters may be accepted for transfer upon prior dept. approval. | | | | | | |
| | CERTIFICATE IN GRAPHIC DESIGN & DIGITAL IMAGING (See page 4 for required courses.) | | | | | | |
| | CERTIFICATE IN WEB DESIGN & DEVELOPMENT (See page 3 for required courses.) | | | | | | |
| | CERTIFICATE IN INTERACTIVE GAME DESIGN (See page 3 for required courses.) | | | | | | |
| Art History | 58.101-011 | Art Appreciation | 7:00-10:00 pm | M/W | 3 | AE, Area II | Charles Giuliano |
| | 58.203-011 | Survey of Art I | 7:30-9:30 am | M-Th | 3 | AE, HS, Area II | Liana Cheney |
| | 58.204-011 | Survey of Art II | 9:45-11:45 am | M-Th | 3 | AE, HS, Area II | Liana Cheney |
| | 58.494-011 | Directed Studies | TBA | TBA | 3 | HS | Department Faculty |
| Biological Sciences | 35.211-011 | Basic Clinical Microbiology & Pathology | 9:45-11:45 am | M-Th | 3 | P: 35.102, 35.104; C: 35.213, SL | Jacob Lam |
| | 35.213-011 | Clinical Microbiology & Pathology Lab | Noon-3:00 pm | M/T/W | 1 (3) | P: 35.102, 35.104; C: 35.211, SL | Jacob Lam |
| | 81.320-011 | Botany | 7:30-9:30 am | M-Th | 3 | SL, C: 81.322 | Ezequiel Rivera |
| | 81.322-011 | Botany Lab | 2:15-5:15 pm | M/Th | 1 (2) | SL, C: 81.320 | Ezequiel Rivera |
| | 83.101-011 | Life Science I | Noon-2:00 pm | M-Th | 3 | C: 83.103, Area III, SL | Siu-Lam Lee |
| | 83.101-012 | Life Science I | 7:00-10:00 pm | T/Th | 3 | C: 83.103, Area III, SL | G. Skinner-Brassard |
| | 83.103-011 | Life Science I Lab | 2:15-4:15 pm | T/Th | 1 (2) | C: 83.101, Area III, SL | Siu-Lam Lee |
| | 83.103-012 | Life Science I Lab | 7:00-10:00 pm | M/W | 1 (2) | C: 83.101, Area III, SL | Department Faculty |
| Chemical and Nuclear Engineering | 10.347-011 | Elements of Thermodynamics and Heat Transfer | 7:30-9:30 am | M-Th | 3 | P: 92.132, 95.141 | Department Faculty |
| | NEW! 10.336-011 | Programming & Problem Solving with MATLAB | 7:30-9:30 am | M-Th | 3 | P: 92.234 or 92.236 | John White |
| Chemistry | 84.111-011 | General Chemistry I | Noon-2:00 pm | M-Th | 3 | SL | K. P. Li |
| | 84.113-011 | General Chemistry Lab I | 2:15-5:15 pm | M/W/Th | 1 (3) | C: 84.111, SL | Paul Damour |
| | 84.121-011 | Chemistry I | 9:45-11:45 am | M-Th | 3 | P: Science, Eng. & Eng. Tech. majors only; others with dept. permission; C: 84.123, SL | Judith Goldsberry |
| | 84.121-012 | Chemistry I | 7:00-10:00 pm | M/W | 3 | P: Science, Eng. & Eng. Tech. majors only; others with dept. permission; C: 84.123, SL | Gregory Slack |
| | 84.122-011 | Chemistry II | 7:00-10:00 pm | T/Th | 3 | P: 84.121; Eng. & Eng. Tech. majors; others with department permission; C: 84.124, SL | Philip Lamprey |
| | 84.123-011 | Chemistry Lab I | 2:15-5:15 pm | M/W/Th | 1 (3) | C: 84.121, SL | Judith Goldsberry |
| | 84.123-012 | Chemistry Lab I | 7:00-10:00 pm | T/Th | 1 (3) | C: 84.121, SL | Paul Damour |
| | 84.124-011 | Chemistry Lab II | 7:00-10:00 pm | M/W | 1 (3) | P: 84.123; C: 84.122, SL | Department Faculty |
| | 84.221-011 | Organic Chemistry I | Noon-2:00 pm | M-Th | 3 | P: 84.122, 84.124; C: 84.229, SL | Gene Davis |
| | 84.229-011 | Organic Chemistry Lab I | 2:15-6:15 pm | M/W/Th | 1 (4) | C: 84.221, SL | James Foley |
| | 84.339-011 | Physical Chemistry | 6:00-9:00 pm | W | 2 | Plastics majors only | Joey Mead |
| | 86.131-011 | Environmental Chemistry I | 7:00-10:00 pm | M/W | 3 | SL | C. Panagiotakos |
| | 86.223-011 | Organic Chemistry I | 7:00-10:00 pm | T/Th | 3 | P: 84.122, 84.124; C: 86.225, SL | Gene Davis |
| | 86.225-011 | Organic Chemistry Lab I | 6:00-10:00 pm | M/W | 1 (4) | C: 86.223, SL | Judith Freeman |
| Cinema | 52.335-011 | Cinema and Italian Americans | 9:45-11:45 am | M-Th | 3 | Area II, HV, AE | Mario Aste |
| | 52.378-011 | Italian Cinema and Culture | Noon-2:00 pm | M-Th | 3 | Area II, HV, AE | Mario Aste |
| Civil Engineering Technology | 15.113-011 | CAD | 7:00-10:00 pm | T/Th | 2 (3) | P: 23.101 | C. William Lincoln |
| | 15.246-011 | Hydraulics | 6:00-9:00 pm | T/Th | 3 | P: 15.237 or 23.221 | Department Faculty |
| | CERTIFICATE IN ENVIRONMENTAL TECHNOLOGY (See page 4 for required courses.) | | | | | | |
| | CERTIFICATE IN LAND SURVEYING (See page 5 for required courses.) | | | | | | |
| Civil Engineering Technology Water/Wastewater Option | 15.152-011 | Water Biology | 7:00-10:00 pm | T/Th | 3 | | Therese Champigny |
| | 15.274-011 | Water Works Operations Lab I | 7:00-10:00 pm | T/Th | 1 (3) | | Department Faculty |
| | 15.340-011 | Hazardous Waste Management | 7:00-10:00 pm | M/W | 3 | | Department Faculty |
| | 86.131-011 | Environmental Chemistry I | 7:00-10:00 pm | M/W | 3 | | C. Panagiotakos |
| | CERTIFICATE IN HAZARDOUS WASTE MANAGEMENT (See page 5 for required courses.) | | | | | | |
| | CERTIFICATE IN WATER TREATMENT (See page 5 for required courses.) | | | | | | |
| | CERTIFICATE IN WASTEWATER TREATMENT (See page 5 for required courses.) | | | | | | |
| Client/Server Technology | (See courses listed under Information Technology.) | | | | | | |
| CERTIFICATE IN CLIENT/SERVER TECHNOLOGY (See page 3 for required courses.) | | | | | | | |
| Computer Mathematics | (See courses listed under Information Technology.) | | | | | | |

Academic Credit Course Listing

| | | | | | | | |
|---|--|---|----------------------------------|--------|-------|--|---------------------|
| Computer Science (see also Information Technology) | 91.102-021 | Computing II (14 weeks) | 5:30-8:30 pm | T | 3 | P: 91.101 | Jose Annunziato |
| | 91.113-011 | Exploring the Internet | 7:00-10:00 pm | M/W | 3 | | Marjan Trutschl |
| | 91.113-012 | Exploring the Internet | 9:45-11:45 am | M-Th | 3 | | Guillermo Zeballos |
| | 91.305-021 | Computer Architecture (14 weeks) | 5:00-8:00 pm | W | 3 | P: 91.203, 91.102 | David Hendrickson |
| | 91.308-021 | Operating Systems (14 weeks) | 5:00-8:00 pm | Th | 3 | P: 91.204, 91.305 | Ali Rafiemyhr |
| | 91.373-021 | Dynamic HTML Development (14 weeks) | CyberEd/On-Line course | | 3 | | William Dubie |
| | 91.404-021 | Analysis of Algorithms (14 weeks) | 5:30-8:30 pm | T | 3 | P: 91.204, 92.322 | Urska Cvek |
| CERTIFICATE IN COMPUTER SCIENCE — BRIDGE TO THE MASTER'S PROGRAM (See page 3 for required courses.) | | | | | | | |
| Criminal Justice (see also Paralegal Studies) | 44.201-011 | Computer Applications for C. J. | 9:45-11:45 am | M-Th | 3 | | Joseph Lipchitz |
| | 44.261-011 | Juvenile Delinquency | 7:00-10:00 pm | T/Th | 3 | | Robert DeMoura |
| | 44.301-011 | Computer Appl. for the Legal Profession | 7:00-10:00 pm | T/Th | 3 | P: 41.103 | Paula M. Souza |
| | 44.351-011 | Community-Based Corrections | 7:00-10:00 pm | M/W | 3 | | Steven Sacco |
| | 44.380-011 | Selected Issues: Stress Management | 6:00-9:00 pm | T/Th | 3 | | Gerald Tully |
| | 44.390-011 | Intro to Criminal Justice Research Methods | 9:45-11:45 am | M-Th | 3 | P: 44.101 | Don Hummer |
| | 44.496-011 | Criminal Justice Practicum | TBA | TBA | 3 | P: Instructor permission | Gerald Hotaling |
| | 44.496-012 | Criminal Justice Practicum | TBA | TBA | 3 | P: Instructor permission | Alan Lincoln |
| | 44.497-011 | Paralegal Practicum | TBA | TBA | 3 | P: Minimum of 3 paralegal courses and instructor permission; call (978) 649-9880 | Donna Zils Banfield |
| | CERTIFICATE IN COMMUNITY POLICING (See page 4 for required courses.) CERTIFICATE IN PARALEGAL STUDIES | | | | | | |
| Economics | 49.201-011 | Economics I (Microeconomics) | 9:45-11:45 am | M-Th | 3 | Area I, BS | George Dery |
| | 49.201-012 | Economics I (Microeconomics) | 7:00-10:00 pm | M/W | 3 | Area I, BS | Department Faculty |
| | 49.201-013 | Economics I (Microeconomics) | 7:00-10:00 pm | T/Th | 3 | Area I, BS | Michael Carter |
| | 49.202-011 | Economics II (Macroeconomics) | 7:00-10:00 pm | T/Th | 3 | Area I, BS | Department Faculty |
| | 49.211-011 | Statistics I | 9:45-11:45 am | M-Th | 3 | P: 92.122 or equivalent | Paul Snoonian |
| | 49.315-011 | Introduction to Environmental Economics | Noon-2:00 pm | M-Th | 3 | P: 49.210; Area I, BSV | Paul Snoonian |
| Electrical & Computer Engineering | 16.312-011 | Electronics II Lab | 4:00-7:00 pm | M/W | 2 (3) | P: 16.311; C: 16.366 | Donn Clark |
| | 16.364-011 | Engineering Mathematics | 6:00-9:00 pm | T/Th | 3 | P: 92.234, 16.201 | A. J. Noushin |
| | 16.366-021 | Electronics II | 6:00-9:00 pm (May 25-July 13) | T/Th | 3 | P: 16.365; C: 16.312 | David Wade |
| | 16.409-011 | Project Laboratory | TBA | TBA | 3 | P: Department Faculty permission | Ziyad Salameh |
| | 16.491-011 | Industrial Experience | TBA | TBA | 3 | P: Permission by Alan Rux | Alan Rux |
| | 16.492-011 | Industrial Experience | TBA | TBA | 3 | P: Permission by Alan Rux | Alan Rux |
| | 16.493-011 | Industrial Experience | TBA | TBA | 3 | P: Permission by Alan Rux | Alan Rux |
| Electronic Engineering Technology | 17.130-011 | Electrical Basics and Laboratory | 7:00-10:00 pm | T/Th | 2 (3) | P: 42.226, 92.267, 99.132 | Richard Cornely |
| | 17.213-011 | Electric Circuits | 7:00-10:00 pm | M/W | 3 | P: 92.125 (may be taken concurrently), 92.267 | James Davis |
| | 17.477-011 | Electromagnetic Theory II | 7:00-10:00 pm | T/Th | 3 | P: 17.376, 92.234 | Syama Chaudhuri |
| | CERTIFICATE IN ELECTRONICS TECHNOLOGY CERTIFICATE IN ELECTRO-OPTICS CERTIFICATE IN SEMICONDUCTOR MANUFACTURING | | | | | | |
| English | 42.101-011 | College Writing I | 7:30-9:30 am | M-Th | 3 | | William Coughlin |
| | 42.101-012 | College Writing I | 7:00-10:00 pm | M/W | 3 | | Department Faculty |
| | 42.101-022 | College Writing I (14 weeks) | CyberEd/On-Line Course | | 3 | Requires CommonSpace software | Lisa Mahoney |
| | 42.102-011 | College Writing II | 9:45-11:45 am | M-Th | 3 | P: 42.101 | William Coughlin |
| | 42.102-012 | College Writing II | 7:00-10:00 pm | T/Th | 3 | P: 42.101 | Department Faculty |
| | 42.103-011 | College Writing I for International Students | 7:00-10:00 pm | M/W | 3 | | C. Mahadeswaraswamy |
| | 42.205-011 | Human Values — Western Culture | 7:00-10:00 pm | T/Th | 3 | P: LTV, Area II | Joseph Zaitchik |
| | 42.212-011 | The Short Story | 7:00-10:00 pm | T/Th | 3 | P: 42.102, Area II, LT | Paul Francoeur |
| | 42.217-011 | Horror Story | Noon-2:00 pm | M-Th | 3 | P: 42.102, Area II, LT | Lucilia Valerio |
| | 42.221-021 | Writing for Interactive Media (14 weeks) | CyberEd/On-Line Course | | 3 | Requires word processing and flowcharting software | Timothy Garrand |
| | 42.224-011* | Business Writing | 7:00-10:00 pm | M/W | 3 | P: 42.102 | Peter Payack |
| | 42.224-021* | Business Writing (14 weeks) | CyberEd/On-Line Course | | 3 | P: 42.102; requires CommonSpace software | Nancy Brown |
| | 42.226-011* | Technical and Scientific Communication | 6:30-9:30 pm | T/Th | 3 | P: 42.102 | Richard Keating |
| | 42.226-021* | Technical and Scientific Communication (14 weeks) | CyberEd/On-Line Course | | 3 | P: 42.102; requires CommonSpace software | Dirk Messelaar |
| | 42.232-011 | Turning Fiction into Film | 7:00-10:00 pm | M/W | 3 | P: 42.102 | Paula Haines |
| | 42.267-011 | Introduction to Shakespeare | 9:45-11:45 am | M-Th | 3 | P: 42.102, Area II, LT | William Hersey |
| | 42.282-011 | Crime in Literature | 7:30-9:30 am | M-Th | 3 | P: 42.102, LT, Area II | William Hersey |
| | 42.294-011 | History of American Literature I | 7:00-10:00 pm | M/W | 3 | P: 42.102, LT, Area II | Department Faculty |
| | 42.300-011 | Journalism | 7:00-10:00 pm | T/Th | 3 | P: 42.102 | Lewis Gurman |
| | 42.302-011 | Creative Writing: Fiction | 7:00-10:00 pm | M/W | 3 | P: 42.102 | Jay Atkinson |
| | 42.304-011 | Creative Writing: Screenwriting | 7:00-10:00 pm | M/W | 3 | P: 42.102 | Richard Farrell |
| | 42.403-021 | Advanced Software Writing (14 weeks) | 7:00-10:00 pm | T | 3 | P: 42.102 | David Locke |
| | *Please note that students may not receive credit for both 42.224 and 42.226. CERTIFICATE IN TECHNICAL WRITING (See page 4 for required courses.) | | | | | | |
| Environmental Sciences | 87.115-011 | Astronomy | 7:00-10:00 pm | T/Th | 3 | Area III, SC | Arnold O'Brien |
| | 87.404-011 | Intro to GIS Using MapInfo | 6:00-9:00 pm | M/W | 3 | | William Hamilton |
| (See offerings under Civil Engineering Technology, Chemistry, Environmental Sciences, and Water/Wastewater Option.) CERTIFICATE IN ENVIRONMENTAL TECHNOLOGY (See page 4 for required courses.) | | | | | | | |
| Graphic Design & Digital Imaging | (See courses listed under Art and Information Technology.) CERTIFICATE IN GRAPHIC DESIGN AND DIGITAL IMAGING (See page 4 for required courses.) | | | | | | |
| Health Professions | 30.201-011 | Community Health | 9:45-11:45 am | M-Th | 3 | | Nicole Champagne |
| | 30.306-011 | Introduction to Gerontology | 12:00-2:00 pm | M-Th | 3 | BS | Judith Conahan |
| | 30.315-011 | Kinesiology and Lab | 9:45-11:45 am | M-F | 4 | P: All freshmen, soph. E.P. courses and 1 yr. of A. and P. and 1 yr. of Physics | Joseph Dorsey |
| | 35.101-011 | Human Anatomy and Physiology I | 9:45-11:45 am | M-Th | 3 | C: 35.103, SL | Alease Bruce |
| | 35.103-011 | Human Anatomy and Physiology I Lab | 1:00-4:00 pm | T/W/Th | 1 (3) | C: 35.101, SL | Alease Bruce |
| | 35.206-011 | Human Nutrition | 6:00-9:00 pm | T/Th | 3 | | Paul Fierimonte |
| | 35.211-011 | Basic Clinical Microbiology and Pathology | 9:45-11:45 am | M-Th | 3 | P: 35.102, 35.104; C: 35.213, SL | Jacob Lam |
| | 35.213-011 | Basic Clinical Microbiology & Path. Lab | Noon-3:00 pm | M/T/W | 1 (3) | P: 35.102, 35.104; C: 35.211, SL | Jacob Lam |
| | 36.350-011 | Human Biochemistry | 7:00-10:00 pm | M/W | 3 | P: 35.252 or equivalent | Department Faculty |
| | 35.356-011 | Pharmacology | 7:30-9:30 am | M-Th | 3 | P: Junior level | Arthur Vergados |
| | CERTIFICATE IN NUTRITION | | | | | | |
| History (see also Art History) | 43.105-011 | Western Civilization I | 7:30-9:30 am | M-Th | 3 | Area II, HS | Jonathan Liebowitz |
| | 43.106-011 | The Modern World | 9:45-11:45 am | M-Th | 3 | Area II, HS | Jonathan Liebowitz |
| | 43.112-011 | U.S. Since 1877 | 9:45-11:45 am | M-Th | 3 | Area II, HS | Dean Bergeron |
| | 43.206-011 | American Economic History | 7:30-9:30 am | M-Th | 3 | Area II, HS | Joseph Lipchitz |
| | 43.373-011 | U.S. Social History Since 1950 | 7:00-10:00 pm | T/Th | 3 | Area II, HS | Pamela Edwards |
| | 46.368-011 | Middle East Politics | 7:30-9:30 am | M-Th | 3 | For History credit also | Dean Bergeron |

Academic Credit Course Listing

| | | | | | | | |
|--|---|---|------------------------|---|---|--------------|---------------------|
| Information Technology (including Multimedia and Computer Graphics) | (Also see Art and Computer Science for additional computer offerings.) | | | | | | |
| | 90.160-021 | Intro to Information Systems (14 weeks) | CyberEd/On-Line Course | 3 | | | Luvai Motawalla |
| | 90.171-011 | Applications Software: Access | 6:00-9:00 pm T/Th | 3 | P: 92.202 or equivalent | | Richard Abers |
| | 90.230-011 | Intro to Multimedia/Windows | 7:00-10:00 pm M/W | 3 | | | Chris Perry |
| | 90.231-011 | Graphics for Multimedia/Mac | 7:00-10:00 pm T/Th | 3 | P: 90.230 | | Randy Howe |
| | 90.233-011 | Multimedia Authoring Software Using Macromedia Director/Windows | 7:00-10:00 pm T/Th | 3 | P: 90.230 | | Beatrice Lee |
| | 90.238-011 | Website Development Using Microsoft FrontPage/Windows | 7:00-10:00 pm M/W | 3 | P: Windows proficiency | | Fred Plaisted |
| | 90.301-011 | Java Programming | 7:00-10:00 pm T/Th | 3 | P: 92.268 | | Marjan Trutschl |
| | 90.301-012 | Java Programming | 7:00-10:00 pm M/W | 3 | P: 92.268 | | Department Faculty |
| | 90.301-021 | Java Programming (14 weeks) | CyberEd/On-Line Course | 3 | P: 92.268, req. Sun Java Dev. Kit | | Adrian Smith |
| | 90.302-021 | Java Script (14 weeks) | CyberEd/On-Line Course | 3 | P: 91.373 or prev. computer exper. | | David Sciuto |
| | 90.305-021 | Introduction to Perl (14 weeks) | CyberEd/On-Line Course | 3 | P: 92.267 | | Paul Gong |
| | NEW! 90.306-011 | XML | 7:00-10:00 pm T/Th | 3 | P: 91.373 or equivalent | | David Sciuto |
| | 90.340-021 | Intro to the Application & Development of Intranets (14 weeks) | CyberEd/On-Line Course | 3 | P: 91.113 or equivalent | | Jerry Goguen |
| | 90.440-021 | Programming for the Internet (14 weeks) | CyberEd/On-Line Course | 3 | P: 90.301, 91.373 | | Scott Gray |
| | 90.461-011 | LAN/WAN Technologies | 7:00-10:00 pm M/W | 3 | | | Alan Wu |
| | 90.461-021 | LAN/WAN Technologies (14 weeks) | CyberEd/On-Line Course | 3 | P: 92.267 | | Richard Sweeney |
| | 90.462-011 | TCP/IP and Network Architecture | 7:00-10:00 pm M/W | 3 | P: 90.461 | | Edwin Barnes |
| | 90.462-022 | TCP/IP and Network Architecture (14 weeks) | CyberEd/On-Line Course | 3 | P: 90.461 | | Edwin Barnes |
| | 90.463-011 | Advanced Network Technology | 7:00-10:00 pm T/Th | 3 | P: 90.462 | | Alan Wu |
| | 90.464-011 | Network Management | 7:00-10:00 pm M/W | 3 | P: 90.463 | | Jaime Fernandez |
| | 92.202-011 | Introduction to PCs and MS Office | 6:00-9:00 pm M/W | 3 | | | Terry Bass |
| | 92.202-012 | Introduction to PCs and MS Office | 6:00-9:00 pm T/Th | 3 | | | Robin Desmond |
| | 92.202-013 | Introduction to PCs and MS Office | 7:00-10:00 pm M/W | 3 | | | John Corliss |
| | 92.211-011* | Intro to Programming with C | 9:45-11:45 am M-Th | 3 | P: 92.121 or equivalent | | Paul Frisoli |
| | 92.211-012* | Intro to Programming with C | 7:00-10:00 pm M/W | 3 | P: 92.121 or equivalent | | James Brzowski |
| | 92.211-013* | Intro to Programming with C | 7:00-10:00 pm T/Th | 3 | P: 92.121 or equivalent | | Christopher Geggis |
| | 92.212-011 | Intro to Programming with C II | 7:00-10:00 pm M/W | 3 | P: 92.211 | | Lisa Verras |
| | 92.220-011 | Visual Basic | 7:00-10:00 pm T/Th | 3 | P: Windows and working knowledge of a high-level language | | Randhir Chhatwal |
| | 92.220-012 | Visual Basic | 7:00-10:00 pm M/W | 3 | P: Windows and working knowledge of a high-level language | | Arthur Chadbourne |
| | 92.220-023 | Visual Basic (14 weeks) | CyberEd/On-Line Course | 3 | P: Windows and working knowledge of a high-level language; requires Visual Basic 6.0 | | Randhir Chhatwal |
| | 92.267-011* | C Programming | Noon-2:00 pm M-Th | 3 | P: previous programming exp. | | Paul Frisoli |
| | 92.267-012* | C Programming | 6:00-9:00 pm M/W | 3 | P: previous programming exp. | | Edward D'Entremont |
| | 92.267-013* | C Programming | 7:00-10:00 pm M/W | 3 | P: previous programming exp. | | Lee Clark |
| | 92.267-014* | C Programming | 6:00-9:00 pm T/Th | 3 | P: previous programming exp. | | Nancy Kiernan |
| | 92.267-015* | C Programming | 7:00-10:00 pm T/Th | 3 | P: previous programming exp. | | Timothy Niesen |
| | 92.267-024* | C Programming (14 weeks) | CyberEd/On-Line Course | 3 | P: previous programming exp.; requires C compiler software | | Timothy Niesen |
| | 92.267-025* | C Programming (14 weeks) | CyberEd/On-Line Course | 3 | P: previous programming exp.; Requires C compiler software | | Ann Marie Hurley |
| | 92.268-024 | C++ Programming (14 weeks) | CyberEd/On-Line Course | 3 | P: 92.267 or 92.212; req. C++ compiler software | | Mark Hertel |
| | 92.268-025 | C++ Programming (14 weeks) | CyberEd/On-Line Course | 3 | P: 92.267 or 92.212; requires C++ compiler software | | Lance Smith |
| | 92.268-026 | C++ Programming (14 weeks) | 7:00-10:00 pm T | 3 | P: 92.267 or 92.212 | | Thomas Kostizak |
| | 92.269-021 | Advanced C++ (14 weeks) | CyberEd/On-Line Course | 3 | P: 92.268; req. C++ compiler soft. | | Mark Hertel |
| | 92.270-011 | Visual C++ | 7:00-10:00 pm M/W | 3 | P: 92.268 | | Department Faculty |
| | 92.311-011 | Intro to the UNIX Operating System | 7:00-10:00 pm M/W | 3 | | | Andrew Garside |
| | 92.311-012 | Intro to the UNIX Operating System | 7:00-10:00 pm T/Th | 3 | | | Partha Mitra |
| | 92.311-013 | Intro to the UNIX Operating System | 7:00-10:00 pm T/Th | 3 | | | Frederick Vegliante |
| | 92.311-014 | Intro to the UNIX Operating System (Held at Hanscom Field AFB, Bedford, MA) | 5:00-8:00 pm T/Th | 3 | | | Laura Hanks |
| | 92.311-022 | Intro to the UNIX Operating Sys. (14 wks) | CyberEd/On-Line Course | 3 | | | Frederick Vegliante |
| | 92.311-023 | Intro to the UNIX Operating Sys. (14 wks) | CyberEd/On-Line Course | 3 | | | Sean McGowan |
| | 92.312-011 | UNIX Shell Programming | 7:00-10:00 pm M/W | 3 | P: 92.311 | | Department Faculty |
| | 92.312-022 | UNIX Shell Programming (14 weeks) | CyberEd/On-Line Course | 3 | P: 92.311 | | Michael Richards |
| | 92.360-011 | Intro to Data Structures/C | 7:00-10:00 pm T/Th | 3 | P: 92.267 or 92.212 and 92.364 | | Daniel Leach |
| | 92.360-021 | Intro to Data Structures/C (14 weeks) | CyberEd/On-Line Course | 3 | P: 92.267 or 92.212 and 92.364; Requires proctored exams | | Victor Gagnon |
| | 92.363-011 | Intro to Data Analysis | 9:45-11:45 am M-Th | 3 | P: 92.183 or equivalent | | Alexander Olsen |
| | 92.364-011 | Problem Solving with C | 7:00-10:00 pm T/Th | 3 | P: 92.212 or 92.267 | | Sean McGowan |
| | 92.419-021 | Computer Algebra with MATHEMATICA (14 weeks) | CyberEd/On-Line Course | 3 | P: 92.126 or a computer prog. lang.; requires MATHEMATICA software | | Kenneth Levasseur |
| | 92.474-011 | Relational Database Concepts (Held at Hanscom Field AFB, Bedford, MA) | 6:30-9:30 pm M/W | 3 | P: 92.267 | | T. Mike Cummings |
| | 92.474-021 | Relational Database Concepts (14 weeks) | CyberEd/On-Line Course | 3 | P: 92.267 | Paul Giguere | Paul Giguere |
| *Students may not receive credit for both 92.211 and 92.267. | | | | | | | |
| CERTIFICATE IN CLIENT/SERVER TECHNOLOGY (See page 3 for required courses.) | | | | | | | |
| CERTIFICATE IN FUNDAMENTALS OF INFORMATION TECHNOLOGY (See page 3 for required courses.) | | | | | | | |
| CERTIFICATE IN INTERNET SYSTEMS ADMINISTRATION (See page 3 for required courses.) | | | | | | | |
| CERTIFICATE IN INTRANET DEVELOPMENT (See page 3 for required courses.) | | | | | | | |
| CERTIFICATE IN MULTIMEDIA APPLICATIONS (See page 3 for required courses.) | | | | | | | |
| CERTIFICATE IN UNIX (See page 3 for required courses.) | | | | | | | |
| CERTIFICATE IN WEB DESIGN AND DEVELOPMENT (See page 3 for required courses.) | | | | | | | |
| Interactive Game Design | (See courses listed under Art and Information Technology.) CERTIFICATE IN INTERACTIVE GAME DESIGN (See page 3 for required courses.) | | | | | | |
| Languages | 50.101-011 | Beginning French I | 9:45-11:45 am M-Th | 3 | | | Roger Lacerte |
| | 50.211-011 | Intermediate Conversational French I | 7:30-9:30 am M-Th | 3 | Area II | | Roger Lacerte |
| | 52.335-011 | Cinema and Italian Americans | 9:45-11:45 am M-Th | 3 | Area II, HV, AE | | Mario Aste |
| | 52.378-011 | Italian Cinema and Culture | Noon-2:00 pm M-Th | 3 | Area II, HV, AE | | Mario Aste |
| | 54.101-011 | Beginning Spanish I | 7:30-9:30 am M-Th | 3 | | | J. Heli Hernandez |
| | 54.101-012 | Beginning Spanish I | 7:00-10:00 pm M/W | 3 | | | Department Faculty |
| | 54.211-011 | Intermediate Conversational Spanish I | 9:45-11:45 am M-Th | 3 | P: 54.102 or equivalent, Area II | | J. Heli Hernandez |
| | 54.211-012 | Intermediate Conversational Spanish I | 7:00-10:00 pm T/Th | 3 | P: 54.102 or equivalent, Area II | | Department Faculty |
| | CERTIFICATE IN SPANISH | | | | | | |
| Legal Studies (see also Paralegal Studies) | 41.262-011 | Introduction to Business Law | 7:00-10:00 pm T/Th | 3 | BS, Collateral to Criminal Justice | | Department Faculty |
| | 41.367-011 | Environmental Law | 7:00-10:00 pm M/W | 3 | | | William Burke |
| | 41.376-012 | Family Law | 7:00-10:00 pm M/W | 3 | | | Russell Karl |
| | 41.381-011 | Women and the Law | 7:00-10:00 pm T/Th | 3 | | | Nancy Dick |
| | 41.387-011 | Legal Research Methods | 7:00-10:00 pm M/W | 3 | | | Nancy Dick |
| | 41.392-011 | Wills, Trusts, and Estates | 7:00-10:00 pm T/Th | 3 | | | Debra Thompson |
| | CERTIFICATE IN PARALEGAL STUDIES | | | | | | |
| Management (see also Accounting and Finance) | 62.201-011 | Marketing Principles | 6:00-9:00 pm T/Th | 3 | P: 47.101, 48.101, 49.201 | | Irwin Shapiro |
| | 62.401-011 | Marketing Communications | 11:00 am-2:00 pm T/Th | 3 | P: 62.201, BSBA students and College of Mgmt. Dean permission | | Kenneth Parker |
| | 62.406-021 | Purchasing and Materials Management (14 weeks) | CyberEd/On-Line Course | 3 | P: 62.201, BSBA students and College of Mgmt. Dean permission; requires proctored exams | | David Lewis |

Academic Credit Course Listing

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|------------|-------------------------------------|------------------------|------|---|--|-----------------|
| 62.496-011 | Special Topics: Entrepreneurship | 7:30-10:30 am | T/Th | 3 | P: 62.201, BSBA students and College of Mgmt. Dean permission | Kenneth Parker |
| 63.210-011 | Operations Analysis | 7:30-10:30 am | M/W | 3 | P: 49.211 | M. Riaz Khan |
| 63.371-011 | Operations Management I | 11:00 am-2:00 pm | M/W | 3 | P: 49.211, 63.210, BSBA students & College of Mgmt. Dean permission | George Liaw |
| 66.301-011 | Organizational Behavior | 9:45 am-12:45 pm | T/Th | 3 | P: BSBA students and College of Management Dean permission | Stuart Freedman |
| 66.490-011 | Strategic Management | 9:45 am-12:45 pm | M/W | 3 | P: 61.301, 62.201, 63.371, 66.301, BSBA students and College of Mgmt. Dean permission; Summer '99 grads only | Louis Zivic |
| 69.231-011 | Business Finance | 7:00-10:00 pm | M/W | 3 | P: 67.102, 49.201, 49.202 | Mel Epstein |
| 69.253-011 | Intro to Management & Org. Behavior | 7:00-10:00 pm | M/W | 3 | | P. G. Zicari |
| 69.281-021 | Purchasing Principles (14 weeks) | CyberEd/On-Line Course | | 3 | Requires proctored exams; P: 62.201 | David Lewis |

NOTE: Courses with the 69 prefix are not intended for matriculating University of Massachusetts Lowell day students and may not transfer into the College of Management day programs.

CERTIFICATE IN PURCHASING MANAGEMENT

| | | | | | | | |
|--|--------------|---|------------------------|------|---|--|--------------------|
| Mathematics (see also Information Technology) | 90.111-011* | Fundamentals of Algebra | 7:00-10:00 pm | T/Th | 3 | | Anthony Sokolowski |
| | 90.111-022* | Fundamentals of Algebra (14 weeks) | CyberEd/On-Line Course | | 3 | Requires proctored exams | Department Faculty |
| | 92.111-011 | Mathematical Perspectives | 9:45-11:45 am | M-Th | 3 | Liberal Arts majors only, Area III | Alan Kaplan |
| | 92.121-011** | Precalculus Mathematics I | 9:45-11:45 am | M-Th | 3 | P: 90.111 or placement exam,*** | Marvin Stick |
| | 92.121-012** | Precalculus Mathematics I | 7:00-10:00 pm | T/Th | 3 | P: 90.111 or placement exam,*** | Candice Weston |
| | 92.122-011 | Management Calculus | 7:30-9:30 am | M-Th | 3 | P: 92.121, Area III, MA | Alexander Olsen |
| | 92.122-012 | Management Calculus | 7:00-10:00 pm | M/W | 3 | P: 92.121, Area III, MA | Michael Williamson |
| | 92.123-011 | Precalculus Mathematics II | 6:30-9:30 pm | T/Th | 3 | P: 92.121, MA | Paul Frisoli |
| | 92.125-011 | Calculus A | 7:00-10:00 pm | T/Th | 3 | P: 92.121, Area III, MA | Jimmie Davis |
| | 92.126-011 | Calculus B | 7:00-10:00 pm | M/W | 3 | P: 92.125, MA | Theresa Schille |
| | 92.127-011 | Calculus IA | 9:45-11:45 am | M-F | 4 | MA | Department Faculty |
| | 92.128-011 | Calculus IB | 9:45-11:45 am | M-F | 4 | P: 92.127, MA | Department Faculty |
| | 92.131-011 | Calculus I | 9:45-11:45 am | M-F | 4 | MA | Ashot Shahinian |
| | 92.131-012 | Calculus I | 7:30-9:30 am | M-F | 4 | MA | Alan Kaplan |
| | 92.132-011 | Calculus II | 7:30-9:30 am | M-F | 4 | P: 92.131, MA | Marvin Stick |
| | 92.132-012 | Calculus II | 9:45-11:45 am | M-F | 4 | P: 92.131, MA | Rida Mirie |
| | 92.183-011 | Introduction to Statistics | 7:30-9:30 am | M-Th | 3 | P: 90.111 or equivalent, Area III, MA | Raj Prasad |
| | 92.183-012 | Introduction to Statistics | 7:00-10:00 pm | T/Th | 3 | P: 90.111 or equivalent, Area III, MA | Raj Prasad |
| | 92.225-011 | Calculus C | 7:00-10:00 pm | T/Th | 3 | P: 92.126, MA | Philip Breen |
| | 92.226-011 | Calculus D | 7:00-10:00 pm | T/Th | 3 | P: 92.225, MA | Robert Johnson |
| | 92.231-011 | Calculus III | Noon-2:00 pm | M-F | 4 | P: 92.132, MA | James Graham-Eagle |
| | 92.234-011 | Differential Equations | 9:45-11:45 am | M-Th | 3 | P: 92.132 or 92.225, MA | James Graham-Eagle |
| | 92.234-012 | Differential Equations | 7:00-10:00 pm | T/Th | 3 | P: 92.132 or 92.225, MA | Rida Mirie |
| | 92.321-011 | Discrete Structures I | Noon-3:00 pm | T/Th | 3 | P: 90.112 or 92.121 | Alan Doerr |
| | 92.322-011 | Discrete Structures II | 9:45-11:45 am | M-Th | 3 | P: 92.321 and 92.231, 92.234 | Alan Doerr |
| | 92.363-011 | Intro to Data Analysis | 9:45-11:45 am | M-Th | 3 | P: 92.183 or equivalent | Alexander Olsen |
| | 92.386-011 | Statistics for Engineering and Science | 6:30-9:30 pm | T/Th | 3 | P: 92.126 or 92.132 | Department Faculty |
| | 92.411-011 | Complex Variables I | 9:45-11:45 am | M-Th | 3 | P: 92.231 or 92.226 | Ronald Brent |
| | 92.414-011 | Pattern Recognition and Neural Networks | 6:30-9:30 pm | M/W | 3 | P: 92.386/Linear Algebra or equiv. | Lee Jones |
| | 92.419-021 | Computer Algebra w/MATHEMATICA (14 weeks) | CyberEd/On-Line Course | | 3 | P: 92.126 or a computer programming language; requires MATHEMATICA | Kenneth Levasseur |
| | 92.421-021 | Abstract Algebra I (14 weeks) | CyberEd/On-Line Course | | 3 | P: 92.221 or 92.321; requires MATHEMATICA software | Kenneth Levasseur |
| | 92.435-011 | History of Mathematics | 6:00-9:00 pm | T/Th | 3 | P: 92.221 or instructor permission | Joyce Williams |
| | 92.480-011 | Applied Combinatorics | 5:30-8:30 pm | M/W | 3 | P: Calculus and Discrete Structures | Mark Yin |

*Fundamentals of Algebra (90.111) is a preparatory course and cannot be credited toward a degree program at the University of Massachusetts Lowell.

**Students may not receive credit for both 90.112 and 92.121.

***Placement exam is given the first evening of class.

Many 500-level courses are well within the grasp of upper-level undergraduates and may be used as electives. Refer to the Graduate School listing and contact the Graduate School for admissions procedures. University of Massachusetts Lowell day students must have approval from the Mathematics Coordinator before taking courses with a 90. prefix.

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|---------------------------|------------|------------------------------------|---------------|------|-------|--|--------------------|
| Mechanical Engineering | 22.213-011 | Dynamics | 7:00-10:00 pm | M/W | 3 | P: 22.211, 92.132 | Department Faculty |
| | 22.403-011 | ME Lab II: Measurement Engineering | 3:00-7:00 pm | T/Th | 3 (4) | P: 22.302, 22.311, 22.342 and Department Head permission | Glen Bousquet |
| | 22.441-011 | Analysis of Thermo-Fluid Processes | 7:30-9:30 am | M-Th | 3 | P: 22.242, 22.381 | Yakov Zilberberg |

| | | | | | | | |
|--|--|------------------------------|---------------|------|---|-------------------|------------------|
| Mechanical Engineering Technology & Manufacturing Option | 23.200-011 | CADrf | 7:00-10:00 pm | M/W | 3 | P: 23.101 | Norman Truscott |
| | 23.221-011 | Statics | 7:00-10:00 pm | T/Th | 3 | P: 92.125, 99.131 | Marilynn Keppler |
| | 23.241-011 | Elements of Thermodynamics I | 7:00-10:00 pm | T/Th | 3 | P: 92.126, 99.132 | Vernon Oliver |
| | CERTIFICATE IN COMPUTER-ASSISTED MANUFACTURING (See page 4 for required courses.) CERTIFICATE IN MANUFACTURING TECHNOLOGY CERTIFICATE IN QUALITY ASSURANCE | | | | | | |

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|----------------------------|---|--|--|--|--|--|--|
| Multimedia Applications | (See offerings under Art, Information Technology, and Computer Science.) CERTIFICATE IN MULTIMEDIA APPLICATIONS (See page 3 for required courses.) | | | | | | |
|----------------------------|---|--|--|--|--|--|--|

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|-------|---|-------------------------------------|------------------|------|---|-------------------------------|---------------------|
| Music | 71.100-011 | Fundamentals of Musicianship | 7:00-10:00 pm | M/W | 3 | Music majors only | Jacqueline Charette |
| | 71.102-011 | Music Theory II | 7:30-9:30 am | M-Th | 3 | P: 71.101 | Lisa Cleveland |
| | 71.104-011 | Solfège II | 9:45-11:45 am | M-Th | 3 | P: 71.103 | Mark Peterson |
| | 71.110-011 | Basic Music Theory | 7:00-10:00 pm | M/W | 3 | Non-Music majors, Area II, AE | Juanita Tsu |
| | 71.201-011 | Music Theory III | 7:30-9:30 am | M-Th | 3 | P: 71.102 | Mark Peterson |
| | 71.203-011 | Solfège III | 9:45-11:45 am | M-Th | 3 | P: 71.104 | Lisa Cleveland |
| | 74.261-011 | Survey of Music History I | 7:30-9:30 am | M-Th | 3 | | John Ogasapian |
| | 74.386-011 | Rock and Roll (May 24-28, June 1-2) | 10:00 am-5:00 pm | M-F | 3 | | Scott Fredrickson |
| | For Summer Music Education Program, see page 7. | | | | | | |

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|---|------------|---|---------------|------|---|---|---------------------|
| Paralegal (see also Legal Studies & Criminal Justice) | 41.376-011 | Family Law | 7:00-10:00 pm | M/W | 3 | | Russell Karl |
| | 41.387-011 | Legal Research Methods | 7:00-10:00 pm | M/W | 3 | | Nancy Dick |
| | 44.301-011 | Computer Appl. for the Legal Profession | 7:00-10:00 pm | T/Th | 3 | | Paula M. Souza |
| | 44.497-011 | Paralegal Practicum | TBA | TBA | 3 | P: Minimum of 3 paralegal courses and instructor permission. Call 978-649-9880. | Donna Zils Banfield |

CERTIFICATE IN PARALEGAL STUDIES

| | | | | | | | |
|------------|------------|--------------------------------|---------------|------|---|--------------------|-----------------|
| Philosophy | 45.201-011 | Introduction to Philosophy | 6:00-9:00 pm | T/Th | 3 | Area II and VC, HV | Donald LeBlanc |
| | 45.202-011 | Introduction to Logic | 7:00-10:00 pm | T/Th | 3 | Area II and VC, HV | Peter Skagestad |
| | 45.203-011 | Introduction to Ethics | 7:00-10:00 pm | M/W | 3 | Area II and VC, HV | Tracey Stark |
| | 45.314-011 | Science Fiction and Philosophy | 6:00-9:00 pm | T/Th | 3 | VC, HV | James Hart |

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|---------|------------|--|---------------|------|---------|----------------------------------|------------------|
| Physics | 95.103-011 | General Physics I | 9:45-11:45 am | M-Th | 3 | P: Algebra; C: 96.103, SL | Arthur Mittler |
| | 95.121-011 | Exploring the Universe | 9:45-11:45 am | M-Th | 3 | Area III, SC | Richard Stimets |
| | 95.141-011 | Physics I | 7:30-9:30 am | M-F | 3 (4) | C: 92.131, 96.141, SL | F. Raymond Hardy |
| | 95.144-011 | Physics II | 9:45-11:45 am | M-F | 3 (4) | P: 95.141; C: 92.132, 96.144, SL | Kunnat Sebastian |
| | 96.103-011 | Experimental General Physics I (2 days/week) | 2:15-5:15 pm | T/Th | 1 (1.5) | C: 95.103 or 95.201, SL | Arthur Mittler |
| | 96.141-011 | Experimental Physics I (2 days/week) | 2:15-5:15 pm | M/W | 1 (1.5) | C: 95.141, SL | F. Raymond Hardy |
| | 96.144-011 | Experimental Physics II (2 days/week) | 2:15-5:15 pm | T/Th | 1 (1.5) | P: 96.141; C: 95.144, SL | David Pullen |
| | 99.101-011 | Radiation and Life | 9:45-11:45 am | M-Th | 3 | P: 99.102; SL, Area III | Douglas Lamay |
| | 99.102-011 | Radiation and Life Lab | 2:45-5:15 pm | T/Th | 1 (2) | C: 99.101; SL, Area III | Douglas Lamay |

Academic Credit Course Listing

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|---|---|--|------------------------|------|---|------------------------------------|---------------------|
| Plastics | 27.251-011 | Selected Topics I | 7:00-10:00 pm | M/W | 3 | P: Coordinator permission | Department Faculty |
| | 27.314-011 | Packaging for the Environment | 6:00-9:00 pm | M/W | 3 | | Peter Baker |
| | 27.453-011 | Selected Topics III | 7:00-10:00 pm | T/Th | 3 | P: Coordinator permission | Department Faculty |
| | Note: Courses with the 27 prefix are not eligible for graduate credit. CERTIFICATE IN PLASTICS ENGINEERING TECHNOLOGY (See page 4 for required courses.) | | | | | | |
| Political Science | 46.101-011 | Introduction to American Politics | 7:00-10:00 pm | T/Th | 3 | Area I, BS | Francis Talty |
| | 46.121-011 | Introduction to International Relations | 7:00-10:00 pm | M/W | 3 | Area I, BS | Paula McCabe |
| | 46.230-011 | Law and the Legal System | 7:00-10:00 pm | M/W | 3 | | P. Sullivan Talty |
| | 46.368-011 | Middle East Politics | 7:30-9:30 am | M-Th | 3 | Area I, for History credit also | Dean Bergeron |
| Psychology | 47.101-011 | General Psychology | 7:30-9:30 am | M-Th | 3 | Area I, BS | Peter Hantzis |
| | 47.101-012 | General Psychology | 7:00-10:00 pm | T/Th | 3 | Area I, BS | Donna Goodwill |
| | 47.209-011 | Social Psychology | 7:00-10:00 pm | M/W | 3 | Area I, Human Values, BS | Daryl Graves |
| | 47.232-011 | Psychology of Personality | 7:00-10:00 pm | T/Th | 3 | Area I, BS | Alexandria Weida |
| | 47.260-011 | Human Development I | 7:00-10:00 pm | M/W | 3 | Area I, BS | Department Faculty |
| | 47.269-011 | Research Methods | 9:45-11:45 am | M-Th | 3 | P: 47.101 | Mary Duell |
| | 47.276-011 | Theories of Learning | 7:30-9:30 am | M-Th | 3 | P: 47.101 | Mary Duell |
| | 47.328-011 | Dynamics of Interpersonal Relations | 6:00-9:00 pm | M/W | 3 | Area I | Noel Cartwright |
| | 47.360-011 | Human Development II | 7:30-9:30 am | M-Th | 3 | P: 47.260 | Jane Worthley |
| | 47.361-011 | Prob./Issues in Child/Adolescent Psych. | 7:00-10:00 pm | T/Th | 3 | | S. McLaughlin Beltz |
| | 47.364-011 | Psychology of Crime and Correction | 9:45-11:45 am | M-Th | 3 | P: 47.101 | Richard Siegel |
| | 47.473-011 | Seminar: Social Psychology | 2:15-5:15 pm | M/W | 3 | P: 47.209 or 47.255 & 47.269; AMST | Peter Hantzis |
| Radiological Science | (See Physics.) | | | | | | |
| Sociology | 48.101-011 | Introduction to Sociology | 7:00-10:00 pm | M/W | 3 | Area I, BS | Levon Chorbajian |
| | 48.251-011 | Community Service | 6:00-9:00 pm | T/Th | 3 | Human Values | Mark Levine |
| | 48.317-011 | Sociology of Genocide | 7:00-10:00 pm | T/Th | 3 | P: 48.101 | Levon Chorbajian |
| | 48.350-011 | Social Service | 7:00-10:00 pm | M/W | 3 | P: 48.101 | Jorge Santiago |
| | 48.351-021 | Sociology of Health and Health Care (14 weeks) | CyberEd/On-Line Course | | 3 | P: 48.101 | John Ost |
| Technical Writing | 42.403-021 | Advanced Software Writing (14 weeks) | 7:00-10:00 pm | T | 3 | P: 42.402 | David Locke |
| Technical Writing courses are open to undergraduate and graduate students. CERTIFICATE IN TECHNICAL WRITING (See page 4 for required courses.) | | | | | | | |
| Water/Wastewater Option | (See Civil Engineering Technology: Water/Wastewater Option.) CERTIFICATE IN WASTEWATER TREATMENT (See page 5 for required courses.) CERTIFICATE IN WATER TREATMENT (See page 5 for required courses.) | | | | | | |
| Website Design and Development | (See courses under Art and Information Technology.) CERTIFICATE IN WEB DESIGN AND DEVELOPMENT (See page 3 for required courses.) | | | | | | |

REMINDER: THIS COURSE LISTING COMBINES THE UNIVERSITY OF MASSACHUSETTS LOWELL DAY SCHOOL COURSES AND THE CONTINUING EDUCATION COURSES. IT IS IMPORTANT TO CHECK COURSE NUMBERS AND PREREQUISITES TO ENSURE ENROLLMENT IN THE CORRECT CLASS.

Summer Session II

July 12–August 19, 1999

Day Classes begin on July 12 and meet Monday through Thursday for 3-credit courses and meet Monday through Friday for 4-credit courses.

M/W Evening Classes begin on July 12 and include 2 FRIDAYS: July 16 and July 30 at the regularly scheduled hours.

T/Th Evening Classes begin on July 13 and include 2 FRIDAYS: July 23 and August 6 at the regularly scheduled hours.

| | No. | Title | Time | Eve. | Cr (Co) | P: Prerequisite/ C: Corequisite/Other | Instructor |
|-----------------------|---|---|-----------------|--------|---------|--|----------------------|
| Accounting | 60.202-021 | Accounting/Managerial | 9:45-11:45 am | M-Th | 3 | P: 60.201 or 67.102 | Harry Sauter |
| | 60.331-021 | Cost Management Systems | 7:00-10:00 pm | T/Th | 3 | P: 60.202, BSBA (non-Acct. majors) and College of Mgmt. Dean permission | Paul Brown |
| | 67.101-021* | Accounting Principles I | 7:00-10:00 pm | M/W | 3 | | Claire Bickford |
| | 67.102-021 | Accounting Principles II | 7:00-10:00 pm | T/Th | 3 | P: 67.101 | Harry Sauter |
| | NOTE: Courses with the 67 prefix are not intended for students matriculating in the Bachelor of Science degree programs in the College of Management and may not transfer into the BSBA program. | | | | | | |
| | 60.201 is for students with some accounting/business experience. 67.101 is for students with no accounting experience. *Students may not receive credit for both 60.201 and 67.101. CERTIFICATE IN ACCOUNTING | | | | | | |
| Art/Computer Graphics | (See Summer I listings for 14-week offerings. Also see Information Technology for additional Multimedia and Web Development courses.) | | | | | | |
| | 70.384-021 | Advanced Website Design and Development/Windows | 7:00-10:00 pm | M/W | 3 | P: 70.379, 90.238 | Alexandra Fisher |
| Art History | 58.101-021 | Art Appreciation | 7:00-10:00 pm | T/Th | 3 | Area II, AE | Charles Giuliano |
| | 58.494-021 | Directed Studies | TBA | TBA | 3 | HSA | Liana Cheney |
| | NEW! 58.305-021 | Theater and the Visual Arts | 9:00 am-12 noon | T/Th | 3 | HSA, Area II | Liana Cheney |
| Biological Science | 83.102-021 | Life Science II | 7:00-10:00 pm | M/W | 3 | Area III; C: 83.104, SL | Siu Lam Lee |
| | 83.104-021 | Life Science II Lab | 7:00-10:00 pm | T/Th | 1 (2) | C: 83.102, Area III, SL | Siu Lam Lee |
| | 83.214-021 | Human Ecology | 9:45-11:45 am | M-Th | 3 | Area III, SL | Priscilla Mattson |
| Chemistry | 84.112-021 | General Chemistry II | Noon-2:00 pm | M-Th | 3 | P: 84.111, SL | Susan McFarland |
| | 84.114-021 | General Chemistry II Lab | 2:15-5:15 pm | M/W/Th | 1 (3) | P: 84.113; C: 84.112, SL | Athena Letsou |
| | 84.122-021 | Chemistry II | Noon-2:00 pm | M-Th | 3 | P: 84.121; Science, Eng. & Eng. Tech. majors; others with department permission; C: 84.124, SL | John Sarabia |
| | 84.122-022 | Chemistry II | 7:00-10:00 pm | M/W | 3 | P: 84.121; Science, Eng. & Eng. Tech. majors; others with department permission; C: 84.124, SL | Judith Goldsberry |
| | 84.124-021 | Chemistry Lab II | 2:15-5:15 pm | M/T/Th | 1 (3) | P: 84.123; C: 84.122, SL | John Sarabia |
| | 84.124-022 | Chemistry Lab II | 7:00-10:00 pm | T/Th | 1 (3) | P: 84.123; C: 84.122, SL | Paul Damour |
| | 84.222-021 | Organic Chemistry II A | Noon-2:00 pm | M-Th | 3 | P: 84.221; C: 84.230, SL | Gene Davis |
| | 84.230-021 | Organic Chemistry Lab II A | 2:15-6:15 pm | M/W/Th | 1 (4) | P: 84.229; C: 84.222, SL | James Foley |
| | 86.132-021 | Environmental Chemistry II | 7:00-10:00 pm | M/W | 3 | P: 86.131, SL | Charles Panagiotakos |
| | 86.224-021 | Organic Chemistry II | 7:00-10:00 pm | T/Th | 3 | P: 86.223; C: 86.226; SL | Gene Davis |
| | 86.226-021 | Organic Chemistry II Lab | 6:00-10:00 pm | M/W | 1 (4) | P: 86.225; C: 86.224; SL | Judith Freeman |

Academic Credit Course Listing

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|---|--|--|---------------|--------|-------|---|----------------------|
| Cinema | 52.374-021 | Classics of Italian Cinema | 9:45-11:45 am | M-Th | 3 | Area II, HV, AE | Mario Aste |
| | 52.380-021 | Italian Cinema: Directors and Themes | 7:30-9:30 am | M-Th | 3 | Area II, HV, AE | Mario Aste |
| Civil Engineering Technology | CERTIFICATE IN ENVIRONMENTAL TECHNOLOGY (See page 4 for required courses.) CERTIFICATE IN LAND SURVEYING (See page 5 for required courses.) | | | | | | |
| Civil Engineering Technology: Water/Wastewater Option | 15.154-021 | Water Biology II | 7:00-10:00 pm | T/Th | 3 | P: 15.152 | Therese Champigny |
| | 86.132-021 | Environmental Chemistry II | 7:00-10:00 pm | M/W | 3 | P: 86.131 | Charles Panagiotakos |
| | CERTIFICATE IN HAZARDOUS WASTE MANAGEMENT (See page 5 for required courses.) | | | | | | |
| | CERTIFICATE IN WATER TREATMENT (See page 5 for required courses.) | | | | | | |
| | CERTIFICATE IN WASTEWATER TREATMENT (See page 5 for required courses.) | | | | | | |
| Computer Mathematics | (See courses listed under Information Technology.) | | | | | | |
| Computer Science (see also Information Technology) | (See listings under Computer Science in Summer I for additional 14-week offerings.) | | | | | | |
| | 91.113-021 | Exploring the Internet | 7:00-10:00 pm | M/W | 3 | | Guillermo Zeballos |
| | 91.113-022 | Exploring the Internet | 7:00-10:00 pm | T/Th | 3 | | Marjan Trutschl |
| | 91.373-022 | Dynamic HTML Development | 7:00-10:00 pm | T/Th | 3 | | David Sciuto |
| | CERTIFICATE IN COMPUTER SCIENCE — BRIDGE TO THE MASTER'S PROGRAM (See page 3 for required courses.) | | | | | | |
| Criminal Justice (see also Paralegal Studies) | 44.101-021 | The Criminal Justice System | 7:00-10:00 pm | M/W | 3 | | Erika Gebot |
| | 44.234-021 | Criminal Law | 7:30-9:30 am | M-Th | 3 | | Department Faculty |
| | 44.351-021 | Community-Based Corrections | 7:00-10:00 pm | M/W | 3 | | Department Faculty |
| | CERTIFICATE IN COMMUNITY POLICING (See page 4 for required courses.) | | | | | | |
| | CERTIFICATE IN PARALEGAL STUDIES | | | | | | |
| Economics | 49.201-021 | Economics I (Microeconomics) | 9:45-11:45 am | M-Th | 3 | Area I, BS | Department Faculty |
| | 49.201-022 | Economics I (Microeconomics) | 7:00-10:00 pm | M/W | 3 | Area I, BS | Department Faculty |
| | 49.202-021 | Economics II (Macroeconomics) | 9:45-11:45 am | M-Th | 3 | Area I, BS | Michael Carter |
| | 49.202-022 | Economics II (Macroeconomics) | 7:00-10:00 pm | T/Th | 3 | Area I, BS | Michael Carter |
| | 49.211-021 | Statistics I | 9:45-11:45 am | M-Th | 3 | P: 92.122 or equivalent, BS | Paul Snoonian |
| | 49.212-021 | Statistics II | 7:00-10:00 pm | T/Th | 3 | P: 49.211, BS | Department Faculty |
| Electrical & Computer Engineering | 16.360-011 | Electromagnetic Theory | 7:00-9:00 pm | M-Th | 3 | P: 16.202, 92.234 | Dikshitulu Kalluri |
| | 16.491-021 | Industrial Experience | TBA | TBA | 3 | P: Permission by Alan Rux | Alan Rux |
| | 16.492-021 | Industrial Experience | TBA | TBA | 3 | P: Permission by Alan Rux | Alan Rux |
| | 16.493-021 | Industrial Experience | TBA | TBA | 3 | P: Permission by Alan Rux | Alan Rux |
| English | 42.101-021 | College Writing I | 7:00-10:00 pm | M/W | 3 | | Marjorie Horton |
| | 42.102-021 | College Writing II | 9:45-11:45 am | M-Th | 3 | P: 42.101 | William Hersey |
| | 42.102-022 | College Writing II | 7:00-10:00 pm | T/Th | 3 | P: 42.101 | Department Faculty |
| | 42.104-021 | College Writing II for International Students | 7:00-10:00 pm | M/W | 3 | P: 42.103 | Carol Cujec |
| | 42.212-021 | The Short Story | 7:30-9:30 am | M-Th | 3 | P: 42.102, Area II, LT | William Hersey |
| | 42.217-021 | The Horror Story | 7:00-10:00 pm | T/Th | 3 | P: 42.102, Area II, LT | Henry Venuti |
| | 42.224-022* | Business Writing | 7:00-10:00 pm | M/W | 3 | P: 42.102 | Richard Keating |
| | 42.232-021 | Fiction Into Film | 7:00-10:00 pm | M/W | 3 | | Jeannie Lloyd |
| | 42.295-021 | History of American Literature II | 9:45-11:45 am | M-Th | 3 | P: 42.102, Area II, LT | Henry Venuti |
| | 42.301-021 | Newsriting | 7:00-10:00 pm | M/W | 3 | P: 42.102 | Bridget Driscoll |
| | 42.356-021 | Literature of the Victorian Period | 7:30-9:30 am | M-Th | 3 | P: 42.102, LT | Lucilia Valerio |
| | *Please note that students may not receive credit for both 42.224 and 42.226. | | | | | | |
| | CERTIFICATE IN TECHNICAL WRITING (See page 4 for required courses.) | | | | | | |
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| Graphic Design & Digital Imaging | (See courses listed under Art and Information Technology.) CERTIFICATE IN GRAPHIC DESIGN AND DIGITAL IMAGING (See page 4 for required courses.) | | | | | | |
| Health Professions | 30.305-021 | Exercise Physiology Lecture | 9:45-11:45 am | M-F | 4 | P: Anatomy & Physiology, Chem., SL | Sean Collins |
| | 30.307-021 | Exercise Physiology Lab | 1:00-4:00 pm | M/T/Th | 1 (3) | C: 30.305, SL | Sean Collins |
| | 35.102-021 | Human Anatomy and Physiology II | 9:45-11:45 am | M-Th | 3 | P: 35.101; C: 35.104, SL | Ted Namm |
| | 35.104-021 | Human Anatomy and Physiology II Lab | 1:00-4:00 pm | T/W/Th | 1 (3) | P: 35.103; C: 35.102, SL | Alease Bruce |
| | CERTIFICATE IN NUTRITION | | | | | | |
| History (see also Art History) | 43.106-021 | The Modern World | 6:00-9:00 pm | M/W | 3 | Area II, HS | Alice Walters |
| | 43.111-021 | U.S. History to 1877 | 9:45-11:45 am | M-Th | 3 | Area II, HS | Robert Lemire |
| | 43.341-021 | Cosmopolitan Boston: 1865-1915 | 7:00-10:00 pm | T/Th | 3 | HS | Mark Rennella |
| Information Technology (including Multimedia and Computer Graphics) | (See listings under Summer I for CyberEd courses offered over a 14-week format. See Art/Computer Graphics for additional Web Development courses.) | | | | | | |
| | 90.171-021 | Applications Software: Access | 6:00-9:00 pm | M/W | 3 | | Richard Abers |
| | 90.230-021 | Introduction to Multimedia/Windows | 7:00-10:00 pm | T/Th | 3 | P: Basic Macintosh proficiency | Chris Perry |
| | 90.230-022 | Introduction to Multimedia/Macintosh | 7:00-10:00 pm | T/Th | 3 | P: Basic Macintosh proficiency | Darryl Benjamin |
| | 90.231-021 | Graphics for Multimedia/Windows | 7:00-10:00 pm | M/W | 3 | P: 90.230 | Marina Javis |
| | 90.232-021 | Desktop Video Production/Windows | 7:00-10:00 pm | T/Th | 3 | P: 90.230 | Beatrice Lee |
| | 90.233-021 | Multimedia Authoring Software | 7:00-10:00 pm | M/W | 3 | P: 90.230 | Robin Masi |
| | Using Macromedia Director/Macintosh | | | | | | |
| | 90.303-021 | Advanced JAVA Programming | 7:00-10:00 pm | M/W | 3 | P: 90.301 | Department Faculty |
| | 90.462-021 | Network Architecture and TCP/IP | 7:00-10:00 pm | M/W | 3 | P: 90.461 | Alan Wu |
| | 92.202-021 | Intro to PCs & MS Office | 6:00-9:00 pm | M/W | 3 | | Robin Desmond |
| | 92.202-022 | Intro to PCs & MS Office | 7:00-10:00 pm | T/Th | 3 | | Department Faculty |
| | 92.211-021* | Intro to Programming with C | 7:00-10:00 pm | M/W | 3 | P: 92.121 or equivalent | James Brzowski |
| | 92.211-022* | Intro to Programming with C | 7:00-10:00 pm | T/Th | 3 | P: 92.121 or equivalent | Chris Geggis |
| | 92.212-021 | Intro to Programming with C II | 9:45-11:45 am | M-Th | 3 | P: 92.211 | Paul Frisoli |
| | 92.212-022 | Intro to Programming with C II | 7:00-10:00 pm | M/W | 3 | P: 92.211 | Lisa Verras |
| | 92.220-021 | Visual Basic | 7:00-10:00 pm | T/Th | 3 | P: Windows and working knowledge of a high-level language | Leo Javis |
| | 92.220-022 | Visual Basic | 7:00-10:00 pm | M/W | 3 | P: Windows and working knowledge of a high-level language | Arthur Chadbourne |
| | 92.267-021* | C Programming | 6:00-9:00 pm | M/W | 3 | P: previous programming experience | Paul Frisoli |
| | 92.267-022* | C Programming | 7:00-10:00 pm | T/Th | 3 | P: previous programming experience | Lee Clark |
| | 92.267-023* | C Programming | 6:00-9:00 pm | T/Th | 3 | P: previous programming experience | Nancy Kiernan |
| | 92.268-021 | C++ Programming | 7:00-10:00 pm | M/W | 3 | P: 92.267 or 92.212 | Thomas Kostizak |
| | 92.268-022 | C++ Programming | 7:00-10:00 pm | T/Th | 3 | P: 92.267 or 92.212 | Daniel Leach |
| | 92.268-023 | C++ Programming (Held at Hanscom AFB, Bedford, MA) | 5:00-8:00 pm | T/Th | 3 | P: 92.267 or 92.212 | Laura Hanks |
| | 92.270-021 | Visual C++ | 7:00-10:00 pm | M/W | 3 | P: 92.268 | Department Faculty |
| | 92.311-021 | Intro to the UNIX Operating System | 7:00-10:00 pm | M/W | 3 | P: 92.267 or 92.211 and 92.364 | Edwin Barnes |
| | 92.312-021 | UNIX Shell Programming | 7:00-10:00 pm | M/W | 3 | P: 92.311 | Sean McGowan |
| | *Students may not receive credit for both 92.211 and 92.267. | | | | | | |
| | CERTIFICATE IN CLIENT/SERVER TECHNOLOGY (See page 3 for required courses.) | | | | | | |
| | CERTIFICATE IN DATA/TELECOMMUNICATIONS (See page 3 for required courses.) | | | | | | |
| | CERTIFICATE IN FUNDAMENTALS OF INFORMATION TECHNOLOGY (See page 3 for required courses.) | | | | | | |
| | CERTIFICATE IN INTERNET SYSTEMS ADMINISTRATION (See page 3 for required courses.) | | | | | | |
| | CERTIFICATE IN INTRANET DEVELOPMENT (See page 3 for required courses.) | | | | | | |
| | CERTIFICATE IN MULTIMEDIA APPLICATIONS (See page 3 for required courses.) | | | | | | |
| | CERTIFICATE IN UNIX (See page 3 for required courses.) | | | | | | |

Academic Credit Course Listing

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|---|--|--|---------------|------|---------|--|--------------------|
| Intercollegiate Arts & Sciences Courses | 59.101-021 | Values & Creative Thinking | 7:00-10:00 pm | M/W | 3 | | Shelagh Tomaino |
| Interactive Game Design | (See courses listed under Art and Information Technology.) CERTIFICATE IN INTERACTIVE GAME DESIGN (See page 3 for required courses.) | | | | | | |
| Languages | 50.102-021 | Beginning French II | 9:45-11:45 am | M-Th | 3 | P: 50.101 or equivalent | Roger Lacerte |
| | 50.212-021 | Intermediate Conversational French II | 7:30-9:30 am | M-Th | 3 | P: 50.211 or equivalent, Area II | Roger Lacerte |
| | 52.374-021 | Classics of Italian Cinema | 9:45-11:45 am | M-Th | 3 | Area II, VC, AE | Mario Aste |
| | 52.380-001 | Italian Cinema: Directors and Themes | 7:30-9:30 am | M-Th | 3 | Area II, VC, AE | Mario Aste |
| | 54.102-021 | Beginning Spanish II | 7:30-9:30 am | M-Th | 3 | P: 54.101 or equivalent | J. Heli Hernandez |
| | 54.102-022 | Beginning Spanish II | 7:00-10:00 pm | M/W | 3 | P: 54.101 or equivalent | Department Faculty |
| | 54.212-021 | Intermediate Conversational Spanish II | 9:45-11:45 am | M-Th | 3 | P: 54.211 or equivalent, Area II | J. Heli Hernandez |
| | 54.212-022 | Intermediate Conversational Spanish II | 7:00-10:00 pm | T/Th | 3 | P: 54.211 or equivalent, Area II | Department Faculty |
| | CERTIFICATE IN SPANISH | | | | | | |
| Legal Studies (see also Paralegal Studies) | 41.262-021 | Business Law | 7:00-10:00 pm | M/W | 3 | | Eugene Reardon |
| | 41.363-021 | Corporate and Property Law | 7:00-10:00 pm | T/Th | 3 | | Eugene Reardon |
| | 41.370-021 | Real Estate Law | 7:00-10:00 pm | M/W | 3 | | J. Alan Roberts |
| | 41.381-021 | Women and the Law | 9:45-11:45 am | M-Th | 3 | | Nancy Dick |
| | 41.387-021 | Legal Research Methods | 7:00-10:00 pm | T/Th | 3 | | Nancy Dick |
| | CERTIFICATE IN PARALEGAL STUDIES | | | | | | |
| Management | 61.301-021 | Business Finance | 6:00-9:00 pm | T/Th | 3 | P: 60.201, 49.201, 49.202, BSBA students & Coll. of Mgmt. Dean perm. | Michael Rouse |
| | 69.251-021 | Personnel Management | 7:00-10:00 pm | T/Th | 3 | | P. G. Zicari |
| | 69.276-021 | Entrepreneurial Management | 7:00-10:00 pm | T/Th | 3 | | Mel Epstein |
| | NOTE: Courses with the 69 prefix are not intended for matriculating University of Massachusetts Lowell day students and may not transfer into the College of Management day programs. CERTIFICATE IN PURCHASING MANAGEMENT | | | | | | |
| Mathematics (see also Information Technology) | 90.111-021* | Fundamentals of Algebra | 7:00-10:00 pm | M/W | 3 | | Eugene Welch, Jr. |
| | 92.121-021** | Precalculus Mathematics I | 7:30-9:30 am | M-Th | 3 | Area III, MA | Marvin Stick |
| | 92.121-022** | Precalculus Mathematics I | 7:00-10:00 pm | M/W | 3 | P: 90.111 or placement exam Area III, MA | Candice Weston |
| | 92.122-021 | Management Calculus | 9:45-11:45 am | M-Th | 3 | P: 92.121, Area III, MA | Alexander Olsen |
| | 92.123-021 | Precalculus Mathematics II | 7:00-10:00 pm | T/Th | 3 | P: 92.121, MA | Department Faculty |
| | 92.125-021 | Calculus A | 7:00-10:00 pm | M/W | 3 | P: 92.123, MA | Robert Gravina |
| | 92.126-021 | Calculus B | 7:00-10:00 pm | M/W | 3 | P: 92.125, MA | Department Faculty |
| | 92.131-021 | Calculus I | 9:45-11:45 am | M-F | 4 | MA | Marvin Stick |
| | 92.132-021 | Calculus II | 7:30-9:30 am | M-F | 4 | P: 92.131, MA | Alan Kaplan |
| | 92.132-022 | Calculus II | 9:45-11:45 am | M-F | 4 | P: 92.131, MA | James Graham-Eagle |
| | 92.183-021 | Introduction to Statistics | 7:30-9:30 am | M-Th | 3 | P: 90.111 or equivalent, Area III, MA | Alexander Olsen |
| | 92.183-022 | Introduction to Statistics | 7:00-10:00 pm | M/W | 3 | P: 90.111 or equivalent, Area III, MA | Richard Drost |
| | 92.226-021 | Calculus D | 7:00-10:00 pm | M/W | 3 | P: 92.225, MA | Rida Mirie |
| | 92.231-021 | Calculus III | 9:45-11:45 am | M-F | 4 | P: 92.132, MA | Ronald Brent |
| | 92.234-021 | Differential Equations | 7:00-10:00 pm | T/Th | 3 | P: 92.132 or 92.225, MA | Rida Mirie |
| | 92.321-021 | Discrete Structures I | 7:00-10:00 pm | M/W | 3 | P: 90.112 or 92.121 | Anthony Penta |
| | 92.386-021 | Statistics for Science and Engineering | 7:00-10:00 pm | M/W | 3 | P: 92.226 or 92.132 | Lee Jones |
| | 92.417-021 | Topics in Pattern Recognition and Neural Networks II | TBA | TBA | 3 | P: 92.416/516; call Lee Jones at (978) 934-2448 | Lee Jones |
| | 92.450-021 | Mathematical Modeling | 5:30-8:30 pm | T/Th | 3 | P: Senior standing | James Graham-Eagle |
| | 92.485-021 | Queueing Theory | 6:00-9:00 pm | T/Th | 3 | P: 92.307 or 92.386 with permission | Mark Yin |
| | *Fundamentals of Algebra (90.111) is a preparatory course and cannot be credited toward a degree program at the University of Massachusetts Lowell. **Placement exam is given the first evening of class. Many 500-level courses are well within the grasp of upper-level undergraduates and may be used as electives. Refer to the Graduate School listing and contact the Graduate School for admissions procedures. University of Massachusetts Lowell day students must have approval from the Mathematics Coordinator before taking courses with a 90 prefix. | | | | | | |
| Mechanical Engineering Technology & Manufacturing Option | 23.222-021 | Dynamics | 7:00-10:00 pm | T/Th | 3 | P: 92.126, 23.221 | Marilynn Keppler |
| | 23.243-021 | Elements of Thermodynamics II | 7:00-10:00 pm | T/Th | 3 | P: 23.241 | Vernon Oliver |
| | 23.484-021 | Introduction to Pro-E | 7:00-10:00 pm | M/W | 3 | | Sean Ruhmann |
| | CERTIFICATE IN COMPUTER-ASSISTED MANUFACTURING (See page 4 for required courses.) CERTIFICATE IN MANUFACTURING TECHNOLOGY CERTIFICATE IN QUALITY ASSURANCE | | | | | | |
| Multimedia Applications | (See Computer Mathematics Option and Computer Science.) CERTIFICATE IN MULTIMEDIA APPLICATIONS (See page 3 for required courses.) | | | | | | |
| Music | For Summer Music Education Program, see page 7. | | | | | | |
| | 71.100-021 | Fundamentals of Musicianship | 7:30-9:30 am | M-Th | 3 | Music majors only | Mark Peterson |
| | 71.101-021 | Music Theory I | 7:30-9:30 am | M-Th | 3 | Music majors only | Lisa Cleveland |
| | 71.102-021 | Music Theory II | 9:45-11:45 am | M-Th | 3 | P: 71.101, Music majors only | Lisa Cleveland |
| | 71.110-021 | Basic Music Theory | 7:00-10:00 pm | M/W | 3 | Non-Music majors, Area II, AE | Department Faculty |
| | 71.202-021 | Music Theory IV | 9:45-11:45 am | M-Th | 3 | P: 71.201, Music majors only | Mark Peterson |
| | 71.204-021 | Solfège IV | 9:45-11:45 am | M-Th | 3 | P: 71.203, Music majors only | Department Faculty |
| | 78.301-021 | Music, Technology, and Society | 9:45-11:45 am | M-Th | 3 | Non-Music majors, Area II, AE | Alan Williams |
| Paralegal (see also Legal Studies and Criminal Justice) | 41.363-021 | Corporate and Property Law | 7:00-10:00 pm | T/Th | 3 | | Eugene Reardon |
| | 41.370-021 | Real Estate Law | 7:00-10:00 pm | M/W | 3 | | J. Alan Roberts |
| | 41.387-021 | Legal Research Methods | 7:00-10:00 pm | T/Th | 3 | | Nancy Dick |
| | CERTIFICATE IN PARALEGAL STUDIES | | | | | | |
| Philosophy | 45.201-021 | Introduction to Philosophy | 7:00-10:00 pm | M/W | 3 | Area II and VC, HV | Donald LeBlanc |
| | 45.203-021 | Introduction to Ethics | 7:00-10:00 pm | T/Th | 3 | Area II and VC, HV | Elizabeth Gleason |
| Physics | 95.104-021 | General Physics II | 7:30-9:30 am | M-Th | 3 | P: 95.103; C: 96.104, SL | Roger McLeod |
| | 95.141-021 | Physics I | 9:45-11:45 am | M-F | 3 (4) | P: 92.131; C: 96.141, SL | Paul Ring |
| | 95.144-021 | Physics II | 9:45-11:45 am | M-F | 3 (4) | P: 95.141, 92.132, C: 96.144, SL | Roger McLeod |
| | 96.104-021 | Experimental General Physics II (2 days per week) | 2:15-5:15 pm | T/Th | 1 (1.5) | C: 95.104, SL | Department Faculty |
| | 96.141-021 | Experimental Physics I | 2:15-5:15 pm | M/W | 1 (1.5) | C: 95.141, SL | Department Faculty |
| | 96.144-021 | Experimental Physics II (2 days per week) | 2:15-5:15 pm | T/Th | 1 (1.5) | P: 96.141; C: 95.144, SL | David Pullen |
| Plastics | 27.452-021 | Selected Topics II | 7:00-10:00 pm | M/W | 3 | P: Coordinator permission | Department Faculty |
| | 27.454-021 | Selected Topics IV | 7:00-10:00 pm | T/Th | 3 | P: Coordinator permission | Department Faculty |
| | Courses with the 27. prefix are not eligible for graduate credit. CERTIFICATE IN PLASTICS ENGINEERING TECHNOLOGY (See page 4 for required courses.) | | | | | | |
| Political Science | 46.101-021 | Introduction to American Politics | 7:30-9:30 am | M-Th | 3 | Area I, BS | Department Faculty |
| | 46.121-021 | Introduction to International Relations | 7:00-10:00 pm | M/W | 3 | Area I, BS | Paula McCabe |
| Psychology | 47.101-021 | General Psychology | 7:30-9:30 am | M-Th | 3 | Area I, BS | Department Faculty |
| | 47.101-022 | General Psychology | 7:00-10:00 pm | M/W | 3 | Area I, BS | Daryl Graves |
| | 47.209-021 | Social Psychology | 7:30-9:30 am | M-Th | 3 | Area I, Human Values, BS | Department Faculty |

Academic Credit Course Listing

| | | | | | | | |
|--------------------------------------|---|---------------------------|---------------|------|---|-----------------------|------------------|
| | 47.232-021 | Psychology of Personality | 9:45-11:45 am | M-Th | 3 | P: 47.101, Area I, BS | Jean Sanders |
| | 47.272-021 | Abnormal Psychology | 6:00-9:00 pm | T/Th | 3 | P: 47.101, Area I, BS | John Bayliss |
| | 47.335-021 | Psychology and Women | 7:00-10:00 pm | M/W | 3 | | Charlene Drake |
| Sociology | 48.101-021 | Introduction to Sociology | 7:30-9:30 am | M-Th | 3 | Area I, BS | Levon Chorbajian |
| | 48.101-022 | Introduction to Sociology | 7:00-10:00 pm | T/Th | 3 | Area I, BS | Levon Chorbajian |
| Water/ Wastewater Option | (See Civil Engineering Technology: Water/Wastewater Option.) CERTIFICATE IN WASTEWATER TREATMENT (See page 5 for required courses.) CERTIFICATE IN WATER TREATMENT (See page 5 for required courses.) | | | | | | |
| Website Design and Development | (See courses under Art and Information Technology.) CERTIFICATE IN WEB DESIGN AND DEVELOPMENT (See page 3 for required courses.) | | | | | | |

REMINDER: IT IS IMPORTANT TO CHECK COURSE NUMBERS AND PREREQUISITES TO ENSURE ENROLLMENT IN THE CORRECT CLASS.

Summer Session I GRADUATE COURSES

Except as noted: Day classes begin on May 24.
M/W Evening Classes begin on May 24 and include 3 FRIDAYS: May 28, June 11, and June 25.
T/Th Evening Classes begin on May 25 and include 2 FRIDAYS: June 4 and June 18.

| | No. | Title | Time | Days | Cr | P: Prerequisite/Corequisite/Other | Instructor |
|--|---|--|------------------------|------|-------|---|-----------------------------------|
| Business Administration | Students must be matriculated in the University of Massachusetts Lowell MBA Program and have completed Foundation Core courses. | | | | | | |
| | 60.504-011 | Advanced Managerial Accounting | TBA | TBA | 1 | P: Instructor permission | Norma Powell |
| | 61.610-011 | Financial Markets/Monetary Policy | 6:00-9:00 pm | M/W | 3 | | Michael Carter |
| | 62.660-011 | Marketing Communications | 6:00-9:00 pm | T/Th | 3 | | Kenneth Parker |
| | 66.601-011 | Organization, Design, and Change | 6:00-9:00 pm | T/Th | 3 | | Timm Kainen |
| Computer Science | 91.502-021 | Fundamental Models (14 weeks) | 5:30-8:30 pm | T | 3 | P: 91.500 | Charles Steele |
| | 91.510-021 | Topics (14 weeks) | 5:30-8:30 pm | TBA | 3 | P: Instructor permission | Charles Steele |
| | 91.510-022 | Topics: Computational Finance (14 weeks) | 5:30-8:30 pm | W | 3 | P: Instructor permission | Richard Holmes |
| | 91.520-021 | Internet and Web Systems (14 weeks) | 5:30-8:30 pm | T | 3 | P: Instructor permission | Haim Levkowitz |
| | 91.535-021 | Compiler Construction (14 weeks) | 5:30-8:30 pm | M | 3 | P: 91.534, 91.406 | James Canning |
| | 91.564-021 | Data Communications II (14 weeks) (Held off campus) | 5:30-8:30 pm | W | 3 | P: 91.563 | Byung Kim |
| | 91.570-021 | Discrete Event Simulation (14 weeks) | 5:30-8:30 pm | Th | 3 | P: 91.305, 91.308, 91.404, 91.414 or 91.563 | Giampiero Pecelli |
| | 91.588-021 | Operating Systems (14 weeks) | 5:00-8:00 pm | TH | 3 | P: E.E. Graduate students only | Ali Rafieymehr |
| Criminal Justice | 44.680-011 | Selected Topics: Crime Mapping & Analysis | 7:00-10:00 pm | T/Th | 3 | | Steve DiNoto |
| | 44.691-011 | Graduate Directed Study | TBA | TBA | 3 | P: Instructor permission | Alan Lincoln |
| | 44.691-012 | Graduate Directed Study | TBA | TBA | 3 | P: Instructor permission | Gerald Hotaling |
| | 44.746-011 | Master's Thesis | TBA | TBA | 6 | P: Graduate Coordinator permission | Alan Lincoln |
| Electrical & Computer Engineering | 16.528-011 | Alternate Energy Sources (6 weeks) | 6:00-9:00 pm | M/W | 3 | P: Instructor permission | Ziyad Salameh |
| | 16.575-021* | FPGA Logic Design Techniques | 6:00-8:00 pm | T/Th | 3 | P: 16.265 | James Moran |
| | 16.576-021* | Fuzzy Systems Theory and Applications | 6:00-8:00 pm | M/W | 3 | P: Intro to Logic Design | Syama Chaudhuri |
| | 16.699-021* | Research Topics in Electrical and Computer Engineering | 6:00-8:00 pm | M/W | 3 | P: ≥15 graduate credits | David Wade |
| | 16.721-021 | Special Topics: Electric Vehicle Technology (6 weeks) | 6:00-9:00 pm | T/Th | 3 | P: Instructor permission | Ziyad Salameh |
| *Note: Ten-week Electrical and Computer Engineering courses begin Monday, May 24 or Tuesday, May 25, with final exams on the last course meeting on Wednesday, July 28 or Thursday, July 29. | | | | | | | |
| Health Professions | 33.712-011 | Research Apprenticeship | 9:00 am-Noon | T/Th | 3 | | Cheryl Cox |
| | 34.615-011 | Clinical Education I (5/24-7/2, 1999) | 8:00 am-5:00 pm | M-F | 2 (4) | P: First-year Physical Therapy Graduate students only | Gerald Dybel Constance Seymour |
| Mathematics | 92.500-011 | Discrete Structures | 3:30-6:30 pm | T/Th | 3 | | Alan Doerr |
| | 92.516-011 | Pattern Recognition & Neural Networks | 6:30-9:30 pm | M/W | 3 | P: 92.386/Linear Algebra or equiv. | Lee Jones |
| | 92.521-021 | Algebraic Structures I (14 weeks) | CyberEd/On-Line Course | | 3 | P: 92.221 or 92.321 | Kenneth Levasseur |
| | 92.530-011 | Applied Mathematics I | 5:30-8:00 pm | T/Th | 3 | | James Graham-Eagle |
| | 92.535-011 | History of Mathematics | 6:00-9:00 pm | T/Th | 3 | | Joyce Williams |
| | 92.580-011 | Combinatorics | 5:30-8:00 pm | M/W | 3 | P: Calculus & Discrete Struct. or equiv. | Mark Yin |
| Music | For Summer Music Education Programs, see page 7. | | | | | | |
| Psychology | 47.503-011 | Applied Social Psychology | 6:00-9:00 pm | M/W | 3 | | Elizabeth Murphy |
| | 47.531-011 | Substance Abuse | 6:00-9:00 pm | T/Th | 3 | | Richard Siegel |

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Academic Credit Course Listing

REMINDER: IT IS IMPORTANT TO CHECK COURSE NUMBERS AND PREREQUISITES TO ENSURE ENROLLMENT IN THE CORRECT CLASS.

Summer Session II
GRADUATE COURSES

Except as noted: Day classes begin on July 12.
M/W Evening Classes begin on July 12 and include 2 FRIDAYS: July 16 and July 30.
T/Th Evening Classes begin on July 13 and include 2 FRIDAYS: July 23 and August 6.

| | No. | Title | Time | Days | Cr(Co) | P: Prerequisite/Corequisite/Other | Instructor |
|-----------------------------------|--|--|-----------------|------|--------|---|---------------------------------------|
| Computer Science | (See listings under Summer I for 14-week offerings.) | | | | | | |
| Criminal Justice | 44.691-021 | Graduate Directed Study | TBA | TBA | 3 | P: Instructor permission | Gerald Hotaling Department Faculty |
| | 44.746-021 | Master's Thesis | TBA | TBA | 6 | P: Graduate Coordinator permission | |
| Electrical & Computer Engineering | (See listings under Summer I for 10-week offerings.) | | | | | | |
| Health Professions | 34.634-021 | Clinical Education Experience II (July 5-August 27) | 8:00 am-5:00 pm | M-F | 2 (4) | P: Clinical Education Experience I, Second-year Physical Therapy graduate students only | Gerald Dybel/ Constance Seymour |
| Mathematics | 92.504-021 | Mathematics of Change for Elementary and Middle School Teachers | 6:00-9:00 pm | M/W | 3 | P: Math graduate program credit permission of Coordinator only | Joseph Spadano |
| | 92.517-021 | Topics in Pattern Recognition and Neural Networks | TBA | TBA | 3 | P: 92.416/92.516; call Lee Jones at (978) 934-2448 | Lee Jones |
| | 92.523-021 | Linear Algebra | 3:30-6:30 pm | M/W | 3 | | Department Faculty |
| | 92.531-021 | Applied Mathematics II | 5:30-8:00 pm | M/W | 3 | P: 92.530 | James Graham-Eagle |
| | 92.550-021 | Mathematical Modeling | 5:30-8:00 pm | T/Th | 3 | P: 92.132 or equivalent | James Graham-Eagle |
| | 92.585-021 | Queuing Theory | 6:00-9:00 pm | T/Th | 3 | | Mark Yin |
| Music | For Summer Music Education Programs, see page 7. | | | | | | |
| Psychology | 47.504-021 | The Family System | 6:00-9:00 pm | M/W | 3 | | Jerry Schwartz |
| | 47.551-021 | Psychosocial Aspects of Aging | 6:00-9:00 pm | T/Th | 3 | | Kevin Callahan |

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Writing Program

42.300-011 Journalism (3 credits)
Instructor: **Lew Gurman**
Tues/Thurs 7-10 pm

42.302-011 Creative Writing: Fiction (3 credits)
Instructor: **Jay Atkinson**, fiction/non-fiction writer, author of the novel *Caveman*
Politics
Mon/Wed 7-10 pm

42.304-011 Creative Writing: Screenwriting (3 credits)
Instructor: **Richard Farrell**, author, screenwriter, and award-winning HBO producer
Mon/Wed 7-10 pm

Please see Summer I course listings in this bulletin for additional information and course prerequisites.

Summer Reading Series
Free and open to the public. Readings from faculty, published writers, and students

Location: O'Leary Library 327 (South Campus) **Time:** 7:00-8:00 pm

Thursday, June 3: Faculty Readings

Wednesday, June 16: Poetry Reading — Sarah Getty

Thursday, June 24: Student Readings

info

General Information

Office Hours:

Advising Center, Southwick Hall 223,
Monday-Friday: 8:30 am-5:00 pm

Enrollment Services/Continuing Education,
Southwick Hall 223, Monday-Thursday:
8:30 am-8:30 pm, Friday: 8:30 am-5:00 pm

Holiday Hours and Special Hours

May 31: Memorial Day — University closed

June 6: Commencement

July 5: University closed

July 6 through July 9, the Office of Enrollment
Services/Continuing Education will be open from
8:30 am-5:00 pm.

The week of August 22 through August 27, the
Office of Enrollment Services/Continuing Education
will be open from 8:30 am-7:00 pm.

Phone Directory

Bookstore — North Campus (978) 934-2623

Bookstore — South Campus (978) 934-6908

Continuing Education (978) 934-2480

Main Number

Continuing Education (978) 934-3087

Fax Number

Continuing Education (978) 934-2474

Advising Center

Continuing Education (978) 934-2588

Enrollment Services

Library — North Campus (978) 934-3205

(Alumni/Lydon)

Library — South Campus (978) 934-4550

(O'Leary)

Phone-In Registration — (978) 934-2700

Operator Assisted

Phone-In Registration — (978) 934-2050

Automated

UMass Lowell Main Number (978) 934-4000

Weather Cancellations (978) 934-2121

Fax-In Registration

Fill out the registration form and fax it to (978) 934-3087 no later than the scheduled deadline. Be sure to include your VISA, MasterCard, or Discover number.

Phone-In Registration with an operator

1. Payment can be made by VISA, MasterCard, or Discover only.
2. Call (978) 934-2700 no later than the scheduled deadline. Please refer to the Office of Enrollment Services/Continuing Education hours for phone-in registration times. The registration staff may take only registration information. If you have any questions concerning courses and academic programs, please call (978) 934-2480 or (978) 934-2474.

Automated Phone-In Registration using the Voice Response System (Credit Courses Only)

Students who are presently enrolled at the University of Massachusetts Lowell, Division of Continuing Education and who have a Continuing Education PIN (students registered during Fall and Spring), may now register for summer classes through the touch-tone telephone registration system. This system is available during the following times: Monday-Thursday: 6:00 am-11:00 pm; Friday: 6:00 am-9:00 pm.

To access the system, dial (978) 934-2050 or (978) 934-2049

The Voice Response System will answer the call and ask if you want to access Day School (Option 1) or Evening Division (Option 2). Choose Option 2. You will now be asked for your ID# and, if valid, your Continuing Education PIN.

Hold flags will be checked and if none are found, you will be led through the Registration/Add/Drop process by a series of menus and options.

When you finish selecting your courses, you will be asked to pay by credit card and told the amount owed. Registration will be completed upon payment.

If you hang up anytime during the call or do not complete the payment process, all of the ADD transactions will be undone.

If you experience any problems with this system, please report them to (978) 934-2588.

Walk-In Registration at the Office of Enrollment Services/Continuing Education, Southwick Hall, North Campus

Please refer to the Office of Enrollment Services/Continuing Education hours for walk-in registration. Payment must be made at the time of registration. Payment after 4:00 pm must be made by check, money order, VISA, MasterCard, or Discover. Students will receive class confirmation, room assignment, receipt, and ID at the time they register.

Late Registration

In-person late registration will take place in the Office of Enrollment Services/Continuing Education. See page 18 for late registration dates. **Note: There is an additional \$75.00 fee for late registration.**

Final Drop/Add Period

See the appropriate academic calendar. Drop/adds can be processed in the Office of Enrollment Service/Continuing Education, Southwick Hall, North Campus.

Last Week to Withdraw with "W" Notation

See the appropriate academic calendar for the last day to withdraw. Students withdrawing from any class must officially notify the Office of Enrollment Services/Continuing Education on forms provided by the Office. Verbal messages to faculty or staff do not constitute official notification.

Identification Card

Students registering in person will receive an ID card during the office walk-in registration and general registration. Students who register by phone or mail will receive their ID by return mail with their letter of confirmation.

Students with Disabilities

A student with a disability who needs special arrangements should contact Jane Worthley at (978) 934-2492 early in the registration process. Special advising, registration assistance, preferential scheduling, and alternative examination procedures are available. Students must qualify for handicapped parking stickers. Special parking is also available on a temporary basis.



Financial Information

Tuition is priced on the basis of credit hour unless contact hour is different. Tuition is then based on the listed contact hour.

Tuition and Fee Information

| | |
|--|----------|
| Undergraduate Tuition | \$175.00 |
| (per credit/contact hour) | |
| Undergraduate Audit | \$175.00 |
| (per credit/contact hour) | |
| Off campus (per credit/contact hour) | \$200.00 |
| CyberEd/Distance Learning Courses | \$200.00 |
| (per credit/contact hour) | |
| CyberEd/Distance Learning Courses Audit | \$200.00 |
| (per credit/contact hour) | |
| Late Registration Fee (non-refundable) | \$75.00 |
| Graduate tuition (per credit/contact hour) | \$220.00 |

Students who have checks returned due to insufficient funds will be charged an additional \$30.00 for the processing of the registration.

Overdue Accounts

Students will be permitted to attend class and to utilize facilities only after they have cleared all their financial obligations to the University. In addition, student transcripts and diplomas will not be released unless all indebtedness has been discharged. Should it be necessary to utilize the services of a collection agency or attorney for an overdue student account, the student will be liable for any and all legal fees, commissions, and associated service charges.

Directed Studies

Directed studies and Practicums are considered Special Programs, and, as such, tuition remission and certificates of eligibility cannot be accepted.

Veterans' Information

Veterans must be matriculated in an undergraduate degree program and have all appropriate paperwork on file in the Office of Enrollment Services/Continuing Education, including a DD214, an Admission Application form, and official transcripts from other colleges in order to receive VA benefits. Waivers for legal Massachusetts residents (residency must be documented), which cover 100% of tuition, are not retroactive and do not cover registration and other fees. Veterans requesting benefits must check the appropriate line on the registration form. Veterans should use the mail-in or walk-in options when registering and should provide all necessary documentation (information not accepted by phone or fax). For additional information, call (978) 934-2430.

Third-Party Payment

All students using company direct payment, military plans, state tuition waivers, or veterans' waivers must include the appropriate forms or authorizing letters with their registration, or have them on file. No tuition refund is awarded for late submission of eligibility form. Students receiving company reimbursement must prepay their own tuition. For additional information, call (978) 934-2479.

Senior Citizens

Senior citizens (60 years or older) may attend classes in Continuing Education credit programs tuition-free provided that there are sufficient tuition-paying students enrolled to bear the cost of instruction and provided that space is available. Please note that waivers are not retroactive and do not cover registration and other fees. Proof of birth date must be provided at the time of registration.



Registration Information

Register Early

Get a head start and register early! Although we cannot guarantee an opening in any class, your

chances for being enrolled in the course of your choice are better when you register early. Remember — seats in lab courses are limited.

We encourage you to mail in, phone in, or fax in your registration in sufficient time to guarantee the class of your choice and to receive your classroom confirmation.

See page 18 for Summer I/Summer II registration deadlines.

Mail-In Registration

1. Fill out the registration form and return it postmarked no later than the scheduled deadline.
2. Mail to: University of Massachusetts Lowell
Enrollment Services/Continuing Education
One University Avenue
Lowell, MA 01854-2881
3. Payment must be made with the registration form, either by check, money order, VISA, MasterCard, or Discover. Make checks payable to: University of Massachusetts Lowell.
4. Students will receive class confirmation, room assignment, receipt, and ID by mail before the first class meeting.

Tuition Refund Policy for Credit Courses

Any eligibility for tuition refund is based on the academic calendar, not class attendance, and is pro-rated as follows, excluding fees:

Summer I and 14-week courses excluding CyberEd

| | |
|--|-----------|
| Withdrawal on or before May 10 | 100% |
| Withdrawal from May 11 to before the first class meeting | 90% |
| Before the second class meeting | 80% |
| Before the third class meeting | 40% |
| After third class meeting | No refund |

Summer II

| | |
|---|-----------|
| Withdrawal on or before June 29 | 100% |
| Withdrawal from June 30 to before the first class meeting | 90% |
| Before the second class meeting | 80% |
| Before the third class meeting | 40% |
| After third class meeting | No refund |

Tuition Refund Policy for CyberEd Courses

| | |
|----------------------------------|-----------|
| Withdrawal on or before May 10 | 100% |
| Withdrawal from May 11 to May 21 | 90% |
| Withdrawal through May 28 | 80% |
| Withdrawal through June 4 | 40% |
| Withdrawal after June 5 | No refund |

All fees will be refunded if Continuing Education is responsible for cancellations.

Students withdrawing from any class must officially notify the Office of Enrollment Services/Continuing Education on forms provided by the Office. Verbal messages to faculty or staff do not constitute official notification.

Tuition Refund Policy for students receiving Title IV Financial Aid and enrolled in a degree or specifically designated certificate program

Refunds for Title IV financial aid recipients will be processed according to federal guidelines and institutional policy. Please call the Financial Aid Office at (978) 934-4220 if you have any questions.

Tuition Refund Policy for Noncredit Courses

Participants who withdraw before the first class meeting will receive the total amount paid. Participants who withdraw following the first class meeting will receive a 40% refund. No refunds are given for withdrawal after the second class meeting.

Student Health Insurance

Every student who is enrolled in at least 9 semester hours or more in a degree program is required by Massachusetts state legislation to participate in a qualifying student health insurance program. The cost of this insurance is \$304.00 for the spring and summer semesters and payment of the appropriate fee will be required at registration. To waive participation in this program, students must fill out a form at registration showing equivalent coverage. Name of the insurance company and policy number are required information on the waiver form.

This bulletin is printed at no cost to the Commonwealth of Massachusetts.

The University of Massachusetts Lowell is an Equal Opportunity/Affirmative Action University and does not discriminate in employment or access to programs or services on the basis of race, sex, sexual orientation, color, national origin, religion, handicap, or veteran's status and is in compliance with Title IX of the Education Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973, and the Americans With Disabilities Act, 1990. Any inquiries and/or grievances may be referred to the Affirmative Action Officer, the Title IX Coordinator, the Disabilities Coordinator and/or to the Director, Office for Civil Rights, U.S. Department of Health and Human Services, Washington, D.C.

Every effort has been made to ensure the accuracy of the information presented in this bulletin. However, the Division of Continuing Education reserves the right to implement new rules and regulations and to make changes of any nature in its program, calendar, locations, tuition, and fees. Whenever possible, appropriate notice of such changes will be given before they become effective.

In registering for courses, each student assumes full responsibility for knowledge of and compliance with the definitions, regulations, and procedures for the University as set forth in the appropriate publications and bulletins.



Academic Calendar and Registration Information

Summer Session I

May 24–July 1, 1999

Day classes begin on Monday, May 24.

M/W Evening classes begin on Monday, May 24 and include 3 FRIDAYS: May 28, June 11, and June 25 at the regularly scheduled hours.

T/Th Evening classes begin on Tuesday, May 25 and include 2 FRIDAYS: June 4 and June 18 at the regularly scheduled hours.

We encourage you to mail in, phone in, or fax in your registration in sufficient time to guarantee the class of your choice and to receive your classroom confirmation.

May 31: Memorial Day observed — University closed

| | |
|------------------------|--------------------|
| Mail-In Registration: | April 12 to May 18 |
| Phone-In Registration: | April 12 to May 18 |
| Fax-In Registration: | April 12 to May 18 |
| Walk-In Registration: | April 12 to May 18 |

General Registration: May 17 and May 18

Late Registration: Begins May 19
There is an additional \$75.00 fee for late registration.

Last Day to Add a Lab:

Day Classes: May 26

Last Day for Partial Refund:

(Before the 3rd class meeting)

Day Classes: May 26

M/W Evening Classes: May 28

T/Th Evening Classes: June 1

Last Day to Drop/Add Course:

Day Classes: May 27 (3-credit courses); May 28 (4-credit courses)

M/W Evening Classes: May 28

(Before the 3rd class meeting)

T/Th Evening Classes: June 1

(Before the 3rd class meeting)

CyberEd: May 21

Last Day to Withdraw with "W" Notation:

Day Classes: June 16 for a 3-credit course

June 11 for a 4-credit course

M/W Evening Classes: June 21

(Before the 10th class meeting)

T/Th Evening Classes: June 18

(Before the 10th class meeting)

CyberEd: through July 30

Final Examinations:

Day Classes: June 30 for a 3-credit course;

July 1 for a 4-credit course

M/W Evening Classes: Wednesday, June 30

T/Th Evening Classes: Thursday, July 1

NOTE: M/W evening courses meet twice a week plus 3 Fridays: May 28, June 11, and June 25.

T/Th evening courses meet twice a week plus 2 Fridays: June 4 and June 18.



Summer Session II

July 12–August 19, 1999

Day Classes begin on July 12.

M/W Evening classes begin on July 12 and include 2 FRIDAYS: July 16 and July 30 at the regularly scheduled hours.

T/Th Evening classes begin on July 13 and include 2 FRIDAYS: July 23 and August 6 at the regularly scheduled hours.

We encourage you to mail in, phone in, or fax in your registration in sufficient time to guarantee the class of your choice and to receive your classroom confirmation.

| | |
|------------------------|--------------------|
| Mail-In Registration: | April 12 to July 1 |
| Phone-In Registration: | April 12 to July 1 |
| Fax-In Registration: | April 12 to July 1 |
| Walk-In Registration: | April 12 to July 1 |

Late Registration: Begins July 2

There is an additional \$75.00 fee for late registration.

Last Day to Add a Lab:

Day Classes: July 14

Last Day for Partial Refund:

(Before the 3rd class meeting)

Day Classes: July 14

M/W Evening Classes: July 16

T/Th Evening Classes: July 20

Last Day to Drop/Add Course:

Day Classes: July 15

(Before the 4th class meeting)

M/W Evening Classes: July 16

(Before the 3rd class meeting)

T/Th Evening Classes: July 20

(Before the 3rd class meeting)

Last Day to Withdraw with "W" Notation:

Day Classes: July 27 for a 3-credit course; July 23 for a 4-credit course

(Before the 10th class meeting)

M/W Evening Classes: August 4

(Before the 10th class meeting)

T/Th Evening Classes: August 6

(Before the 10th class meeting)

CyberEd: through July 30

Final Examinations

Day Classes: August 17 for a 3-credit course;

August 18 for a 4-credit course

M/W Evening Classes: Wed, August 18 at 7 pm

T/Th Evening Classes: Thurs, August 19 at 7 pm

Note: M/W evening courses meet twice a week plus 2 Fridays: July 16 and July 30. T/Th evening courses meet twice a week plus 2 Fridays: July 23 and August 6.

Check Out Our World Wide Web Site!

Continuing Education information can also be retrieved over the World Wide Web. Look for us at <http://www.uml.edu/DCE> for additional information on current course schedules, course descriptions, degree or certificate program information and much more!

Academic Information

The University of Massachusetts Lowell is accredited by the New England Association of Schools and Colleges, which accredits schools and colleges in the six New England states. Membership in the Association indicates that the Institution has been carefully evaluated and found to meet standards agreed upon by qualified educators. The programs in Civil Engineering Technology, Electronic Engineering Technology, and Mechanical Engineering Technology are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology. The Bachelor of Science in Business Administration (BSBA) is accredited by the AACSB — The International Association of Management Education.

Catalog

Students should refer to the catalog for rules, regulations, program outlines, and course descriptions. The Division of Continuing Education catalog is available in the Advising Center and in the Office of Enrollment Services. Catalog information is also available through Continuing Education's Website at <http://www.uml.edu/DCE>.

Admission into a Certificate or Degree Program

Students who have graduated from high school or who have earned a high school equivalency certificate are invited to apply for programs leading to a Certificate or an Associate or Baccalaureate degree. Applications for all programs are accepted on a rolling admissions basis. Contact the Division of Continuing Education Office at (978) 934-2470 (certificate programs) or (978) 934-2474 (degree programs) for an application and information on the application procedure. There is no fee to apply. The following degree and certificate programs are available on a part-time evening basis:

College of Engineering

Associate's Degrees

- Civil Engineering Technology
- Civil Engineering Technology: Water Treatment Option
- Civil Engineering Technology: Wastewater Treatment Option
- Civil Engineering Technology: Surveying Option
- Electronic Engineering Technology
- Mechanical Engineering Technology

Bachelor's Degrees

- Civil Engineering Technology
- Civil Engineering Technology: Environmental Option
- Electronic Engineering Technology
- Mechanical Engineering Technology
- Mechanical Engineering Technology: Manufacturing Option

College of Arts and Sciences

Associate's Degree

- Information Systems

Bachelor's Degrees

- Applied Mathematics
- Applied Mathematics:
 - Computer Mathematics Option
- Criminal Justice
- Criminal Justice: Paralegal Option
- Information Systems
- Liberal Arts

College of Management

Associate's Degree

- Management

Bachelor's Degree

- B.S. in Business Administration

Certificate Programs

- Accounting
- Client/Server Technology
- Community Policing

- Computer-Assisted Manufacturing
- Computer Engineering Technology
- Computer Science
- Data/Telecommunications
- Electronics Technology
- Electro-Optics
- Environmental Technology
- Fundamentals of Information Technology (formerly Computer Proficiency)
- Graphic Design and Digital Imaging
- Hazardous Waste Management
- Interactive Game Design
- Internet Systems Administration
- Intranet Development
- Land Surveying
- Manufacturing Technology
- Multimedia Applications
- Nutrition
- Paralegal Studies
- Plastics Engineering Technology and Plastics Engineering Technology with Packaging Option
- Purchasing Management
- Quality Assurance
- Semiconductor Manufacturing
- Spanish
- Technical Writing
- UNIX
- Wastewater Treatment
- Water Treatment
- Web Design and Development

Certificate Completion

When a student completes the necessary courses for a certificate program, the student should complete and submit a Certificate Award Petition to the Division of Continuing Education.

Course Grades

Grade reports for the summer session will be mailed to students approximately two weeks after exams end. Students who have received their PIN can also call the Voice Response System at (978) 934-2050 to receive their summer grades, which will be available as soon as they are posted.

Advising Information

Drop-In Advising Center

Students are welcome to drop by the Advising Center, located in Southwick Hall, from 8:30 am to 5:00 pm for general advising, information on associate and baccalaureate degrees and certificate programs, and/or to obtain catalogs and brochures. Call (978) 934-2474 for information.

Appointments with Program Coordinators and General Advisors

In addition to the advising conducted at the Advising Center, appointments with Advisors and Program Coordinators also are being scheduled. Students are encouraged to call the Advising Center at (978) 934-2474. Evening supervisors are also available from 5:00 to 8:00 pm to answer questions and conduct status reviews.

Evening Supervisors

- Professor Alan Doerr
- Professor Bernard Shapiro

Faculty Advisors

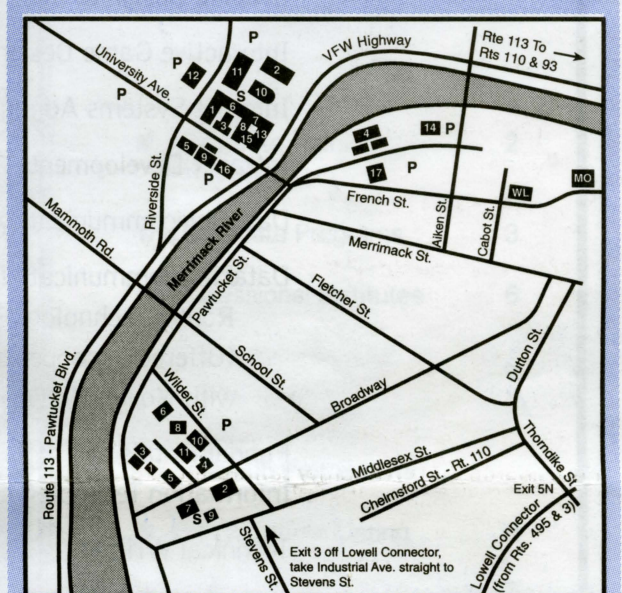
- Professor Alease Bruce: Nutrition and Health
- Professor Paul Damour: Chemistry, Biology, Environmental Science, Physics
- Professor Alan Doerr: Applied Mathematics
- Professor Stephen Driscoll: Plastics, Packaging
- Professor Ann Marie Hurley: Computer Math
- Information Systems Technology
- Professor Joseph Lipchitz: Liberal Arts, Criminal Justice, Paralegal Studies
- Professor Donald Pottle: Chair of Engineering Technology

- Professor Stuart Smith: Computer Science Certificate
- Professor Charles Thompson: Accounting, Banking, Management
- Professor Robert Tuholski: Mechanical Engineering Technology
- Professor Fahd Wakim: Electronic Engineering Technology

General Advisors

- Ms. Elaine Bourret: Accounting, Banking, Management
- Mr. David Driscoll: Multimedia
- Ms. Joyce Roy: Degree and Certificate Programs
- Mr. Steven Tello: CyberEd
- Ms. Brenda Woonton: Degree and Certificate Programs
- Ms. Jane Worthley: Degree and Certificate Programs
- Ms. Amy Yacus: Graphic Design and Digital Imaging

Campus Information



North

- 1 BL Ball Engineering Ctr.
- 2 Costello Gym
- 3 Cumnock Hall
- 4 Dormitories
- 5 Eames Hall
- 6 EB Engineering
- 7 FA Falmouth
- 8 KI Kitson
- 9 Alumni/Lydon Library
- 10 EC Pinanski
- 11 OH Olney
- 12 OS Olsen
- 13 PA Pasteur
- 14 Research Foundation
- 15 SO Southwick Hall
- 16 Smith Hall
- 17 Fox Student Union
- P Parking
- S Security

South

- 1 Allen Hall
- 2 CO Coburn
- 3 Concordia Hall
- 4 Dining Hall
- 5 DU Dugan Hall
- 6 DR Durgin Hall
- 7 MA Mahoney Hall
- 8 OL O'Leary Library
- 9 Power Plant
- 10 Student Union
- 11 WE Weed Hall
- P Parking
- S Security

Downtown

- MO Mogan Center
- WL Wannalancit

Directions

For UMass Lowell on-line directions, call (978) 934-2480.

Parking

Students are encouraged to park in the numerous parking lots on the North and South Campuses. Parking stickers may be obtained from the University Police in Ball 125 North Campus (open 24 hours a day, 7 days a week). This sticker entitles students to park after 5:30 pm in any University parking lot except Cumnock Hall. Students should not park in "Residential Parking" areas because Lowell police will tow.

Locating Your Classroom

Upon registration, students are issued a confirmation printout which includes the two-letter building code and room number. Refer to the map and building key to locate where your class will be held. For assistance, call the Advising Center at (978) 934-2474.

UMASS LOWELL WAS RECENTLY LISTED AS ONE OF THE TOP 10 TRAINING PROVIDERS IN MASSACHUSETTS

SOURCE: BOSTON SOFTWARE NEWSPAPER (APRIL 1999 ISSUE)

Some of UMass Lowell's Signature Information Technology Programs Include:

Certificate Programs:

Client/Server Technology

Multimedia Applications

Graphic Design & Digital Imaging

Interactive Game Design

Internet Systems Administration

Intranet Development

Data/Telecommunications

Data/Telecommunications —
Router Technology Track
(Offered in cooperation
with Nortel Networks)

Fundamentals of
Information Technology

Technical Writing

Computer Science

UNIX

Web Design & Development

*One of New England's largest
and most comprehensive pro-
grams of study in Multimedia
Applications, with over 400 stu-
dents enrolled in the program.*

*New state-of-the-art corporate
programs in Interactive
Game Design, Web Design
and Development, and
Client/Server Technology.*

*Award for Excellence by
the University Continuing
Education Association,
Region 1 — Oct. 28, 1998.*



**Earn an AS or
BS in Information
Systems Part-Time.**

Call for Details!

Registration Form for Credit and Noncredit Courses

**Note: Please remember to fill in your work, home phone numbers and email address.
This will allow us to reach you in case of class cancellations.**

University of Massachusetts Lowell

Continuing Studies and Corporate Education (978) 934-2480
One University Avenue, Lowell, MA 01854

PLEASE USE INK AND PRINT

CHECK APPROPRIATE REGISTRATION STATUS:

- ☐ Summer I (May 24 – July 1) ☐ Summer II (July 12 – August 19)
☐ Graduate ☐ Noncredit/Professional Institutes

Social Security No. _____

Name _____

Street & No. _____

City & State _____ Zip Code _____

Date _____

Sex: ☐ M ☐ F Date of Birth _____

Work phone _____

Home phone _____

Email _____

Company Name _____

Street Address _____

City & State _____

Handicap? ☐ yes ☐ no JTPA? _____

Change of name or address since last registration? ☐ yes ☐ no

Former name _____

Will you be using veteran benefits? ☐ yes ☐ no

State/Active Duty _____ G.I. Bill _____

| COURSES FOR WHICH YOU ARE REGISTERING | | | | | | | | | | | |
|---------------------------------------|--|--|--|--|--------------|--|--|--|--|---------|--|
| Course Number | | | | | Course Title | | | | | Credits | |
| | | | | | SUMMER I | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | SUMMER II | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

COMPLETE IF PAYING BY CREDIT CARD

☐ MasterCard ☐ VISA ☐ Discover Account Number _____

Expiration Date _____ Customer Signature _____

| Tuition and Fees* | |
|--|------|
| Tuition | |
| Late Fee (Save \$75 Late Fee – Register Early!) | |
| Total | \$. |

*Note: If you are registering for both credit and noncredit courses, please photocopy the registration form and register for them separately. Payment for credit and noncredit courses should also be made separately.